AMERICAN BEE JOURNAL

The Oldest Bee Journal in the English Language

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cause no seed was returned. A trip through this area disclosed fields of abandoned prospects as mute evidence of seed and honey failure. A search of the records revealed that climatic conditions were such that nectar was not produced by the plants and so did not attract the bees for pollination visits. Those who may be interested in seed production may be able to use bee counts on blooms as a positive indicator for seed set.

It is true that there may be no control over existing conditions of climate but even with the best of nectar secreting conditions there can be no seed set unless bees are present to effect pollination. It has been shown in orchard pollination that bees are more valuable in periods which are unfavorable to pollination. During one year of record taking in an orchard the bees were prevented from flight during the bloom period except a portion of one afternoon. During that time the bees swarmed on the trees and pollinated enough blooms to set a fair crop of fruit. This orchard produced a crop of unusual value for other orchards not so supplied with bees in abundance were not visited by stray bees from some distant colony. The same value can be realized more easily for the bloom period of legumes extends over a much larger time due to continued bloom. Bees will always avail themselves of any opportunity to secure nectar and pollen which is their life.

The honey producer has realized that legume seed production areas were those where honey could be produced profitably. The honey producer knows that any change in seed production means a change in honey production. Notable examples of such a situation are Arizona, Colorado and North Dakota. Arizona was producing much honey in 1910 from alfalfa but the world war demanded cotton so large areas were lost to legume use and to honey production. Colorado was also famous for the quantity of alfalfa honey during the period of 1900 - 1910. But the increased demand for cultivated crops particularly sugar beets, reduced the legume acreage and also the bee pasture. Another unique experience for the honey producer was in North Dakota. Here agriculture changed from grazing to legume seed production and thousands of colonies of bees aided in the new development of agriculture. Then a decline in seed production brought about a parallel decline in honey production.

Wherever there has been a shift in agriculture which has resulted in a decline in legume seed production there has been a shift in the honey producing business. There was a drastic decline in acreage for legume seed production in Iowa during the period of 1929 - 1934. During this period there was an increase in legume acreage planted but not left for seed. During this same period there has been a corresponding decline in colonies of bees operated for honey. There has also been a sharp decline in the number of operators. This decline in honeybees is not restricted to Iowa but is general throughout the United States. It is felt most in the commercial honey producing areas—those areas where legume seed was formerly produced.

It was a happy period for honey production when sweet clover was considered a necessary part of crop rotation and soil improvement. An unobserved, but vital part of this program was the practice of general seed production as necessary to the whole plan. It was the custom to plant sweet clover to have possible pasture returns the first year and the second year a hay and a seed crop was obtained. Sweet clover was considered essential during this period of soil improvement and the acreage increased rapidly over a large territory in Iowa. Seed was generally produced so that more acreage could be planted in order that soil might be made more profitable.

One observing producer reported in 1928 that farmers were talking of plowing under sweet clover at the end of the first year. This practice increased rapidly throughout the middle west states in the mad rush to grow more acres of cash grain crops. The situation of agriculture is too well known now to everyone who has any relation to that industry. Legume acreage and livestock have disappeared. Corn and oats piled up as surpluses. The acreage devoted to corn during the period 1929 - 1933 increased 33 per cent according to data of the Crop Reporting Service. It is evident now that this agricultural practice broke down of its own weight and chaos resulted. The productivity of the cultivated acres was reduced in the process.

The agricultural program as reconstructed to date has reduced the cultivated acres and surpluses have disappeared, though climate has been a big factor in the situation. The Soil Conservation program is now concerned with the rehabilitation of the productivity of the land which is to be accomplished by the increased use of legumes on each farm unit.

The real key to this program of increased legume acreage is the availability of seed. This means a supply of seed at a price low enough that there may be a general participation. Seed is not really available if the price is so high that a majority of land operators cannot finance the purchase of seed. No individual farm operator can undertake a full expansion of legume acreage if the seed price remains high.

The legume program must look farther than the seeding of acreage. It must encourage a return to crop rotation and crop planning which will call for more acres used for seed production. The supply cannot become liberal when the source is restricted to concentrated seed production. There is no more satisfactory seed to use than that which is produced in the near territory. Alfalfa seed produced in the intermountain states may not be the best for use in all localities in Iowa.

Such a program of general seed production as a part of land diversification must consider a general distribution of bees. It is necessary for a more general recognition of the pollination services of honeybees in legume seed production. Specialists would not deny the value of bees for pollinators of white, alsike and sweet clover.

It is interesting to recall the experience of Russian agriculture in its program to rehabilitate. The fundamental need there was the same as it is here in the central west region, plenty of seed at a low price. Honey producers were made and bees were concentrated in the area which was known to be favorable to seed production. Seed was the first consideration and honey production was secondary. The result was that seed was obtained with which to carry forward the proposed program. It is not necessary to regiment in this country as it was in Russia in order to secure results. There are plenty of beekeepers available with empty equipment waiting for a return of agricultural planning which will permit profitable honey production. The seed situation would be taken care of wonderfully when the necessary realization of the services of bees as pollinators is available.

It should be possible to enlarge the value of honeybees as pollinators, particularly for red clover through the more liberal use of the Caucasian race of bees. There is a feeling prevalent now that red clover is not a source of nectar for honeybees and therefore, that honeybees are of no service as pollinators for this plant. It is a legend that red clover depends on the bumblebees for pollination. Work conducted at the Iowa Experiment Station two decades ago by the Farm Crops and Botany Departments indicated the value of the honeybee in the set of red clover seed. This research has recently been forwarded in Colorado and Iowa with favorable results. The honeybee in Russia is called the red clover pollinator. It is true that the tongue length of the Russian or Caucasian bees is 25 per cent greater than the tongue length of the race of honeybee so commonly used throughout the United States.

Developments of the last six months indicate a definite possibility of a red clover with a short corolla tube. Progress along this line of research offers much for the seed pro-

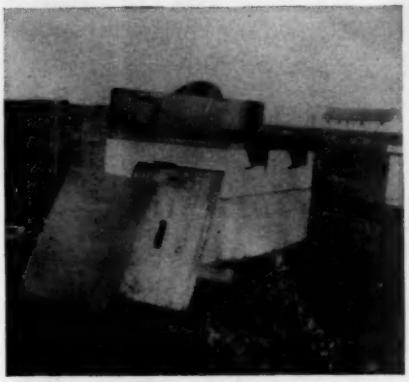
(Please turn to page 549)

One Way to Pack Bees

By Lewis Lawrence,
North Dakota.

HERE are pictures of the way I pack my bees for winter. This is the best case I have used as I have not lost bees using it. In the winter of 1935 with reports of losses as great as two-thirds of the bees, I lost only two colonies which really starved on account of lack of stores.

One picture shows the hives placed together with top entrances. I use a regular honey board or wall board sheet cut to fit the top of the hive with two three-quarter inch holes on one end for the bees to come through the entrance tunnel. The entrance tunnel fits on top the whole length of the hive extending about four inches over the front, where the tunnel proper is made using a four inch strip underneath and an eight inch strip on top to cover the square opening which is cut out to leave passage for the bees.



Packing material assembled; tunnel on top (with two already in place) lower entrances closed, hives in place, covers at the end. Take your choice, either the regular inner cover or the wall board.

Temporary form, used while packing. Top entrances are cut through those upper openings.

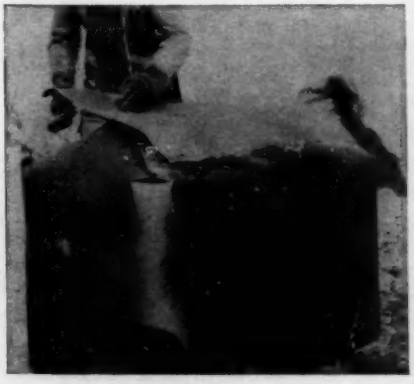
At the rear end of the entrance is a piece four inches wide which telescopes down and through the center of this a small nail is driven into the hive. This keeps the entrance in place and they cannot be moved out of position while the operator is packing.

The entrances are made from soft lumber six inches wide and when honey boards are used, this covers the escape hole in the center. I prefer these because the mice sometimes gnaw holes through the wall board.

Another picture shows how the tar paper wrap is placed inside of the packing form ready for packing. The form is hinged on three sides with hooks at the end and it has cleats on the outside, leaving the inside smooth. Two slots are cut through the front so I can drive tacks into the entrances while the form is on the case. I place four inches of straw around the hives, packing all corners well to hold the case in shape. I then place eight inches on top. Chaffy straw is best.

The pictures also show the top pieces sealed with hot asphalt. I always join the tar paper ends on the side on which the form opens. In other words, I open the side and seal the tar paper ends before removing the form completely. The top is then folded over and sealed and then the top piece is sealed on, which completes the packing.

I cut two holes through the tar paper in the entrances after the case is finished.



Asphalting on the top cover.

The finished job. Snug for winter.

—ABJ—

Pictures for Everybody

Cover

Lloyd Lindenfelser, Peoria, Illinois —"My four year old sister likes to look into things. Always wants to see the queen and play with the drones. She knows they can't sting. Here I point out a baby bee, just emerging, always amusing to Ulla Mae." Try again, Lloyd. (He gets the five dollars this month.)

Packing

Lewis Lawrence makes a series on this page on packing. Just what is needed in detail to pack that way. Few contributors send in better material than this.

Thayers

Ever see clearer pictures than Woodman's describing the Thayer outfit, pages 522 and 523? Russell's drawing is not so bad either.

Hobbyist

Hathaway's picture, page 534 is posed and that's not as good as the so called modern candid, but it is a clear picture and has more detail than the average. Remember these two points.

Friendly Bees

Page 535. Chances like this are usually passed up as too common. But they are often the very ones that mean worth while picture subjects. Weston, the daddy of the famous Club F 64, (the long exposure folks) takes prizes for pictures of GARDEN VEGETABLES.

What About YOU?

Try your skill. Inside pictures a dollar each, if accepted, and a year's extension of your subscription or any dollar book on bees. Cover picture FIVE DOLLARS cash.

—ABJ—

A Grass Brush

When brushing bees from combs in colonies where American foulbrood is suspected, do not use the bee brush. A handful of long grass or weeds would be better and can be burned when through with each colony. Boiling to disinfect a bristle bee brush will surely ruin it for brushing bees again. Frank Johnson,
Wisconsin.

Arthur Thayer and three sons huddled up to prove that they are beekeepers.

A Central Extracting Plant

By A. G. Woodman,
Michigan.

THESE pictures show the extracting room of the central extracting plant and two or three yards of Arthur Thayer & Sons, Freeland Michigan. The Thayers operate 1000 colonies. Russell Thayer prepared the drawing of the plant and most everything is plain enough without explanation.

Under the extracting room is a full basement, 26 by 36 feet, with an outdoor entrance. There is a steam boiler in this basement for wax rendering. The two boys, Russell and Kenneth, and one helper will bring in a truck load of honey into this building in the morning and extract it in the afternoon.

Arthur Thayer has been producing honey for 40 years. He has a fine farm, home, barns and numerous outbuildings. The farm home is surrounded by trees, shrubbery and flowers and the lawn is kept cut. Other brothers run the farm while Russell, Kenneth and father Arthur run the bee business. Russell and his father spend the winter in Florida. The Thayers grow considerable alfalfa on the farm and their farm is as prosperous as the honey producing business.

The central plant is kept the cleanest and most orderly of any we have ever seen. All equipment is arranged to make the work progressive with no loss of motion or extra work.

When I was visiting them, they were extracting and the three workers made a perfect team, two uncapping and one loading and unloading the extractors and carrying supers, with two 50-frame Radials in operation. There is a lot of satisfaction in seeing things in beekeeping well done, just as it is in any other significant business. Of course, the beekeeper must get crops that will keep him interested, progressive and on his toes.

After extracting, the empty supers of combs are set on the super carrier (No. 17 in the diagram), and after

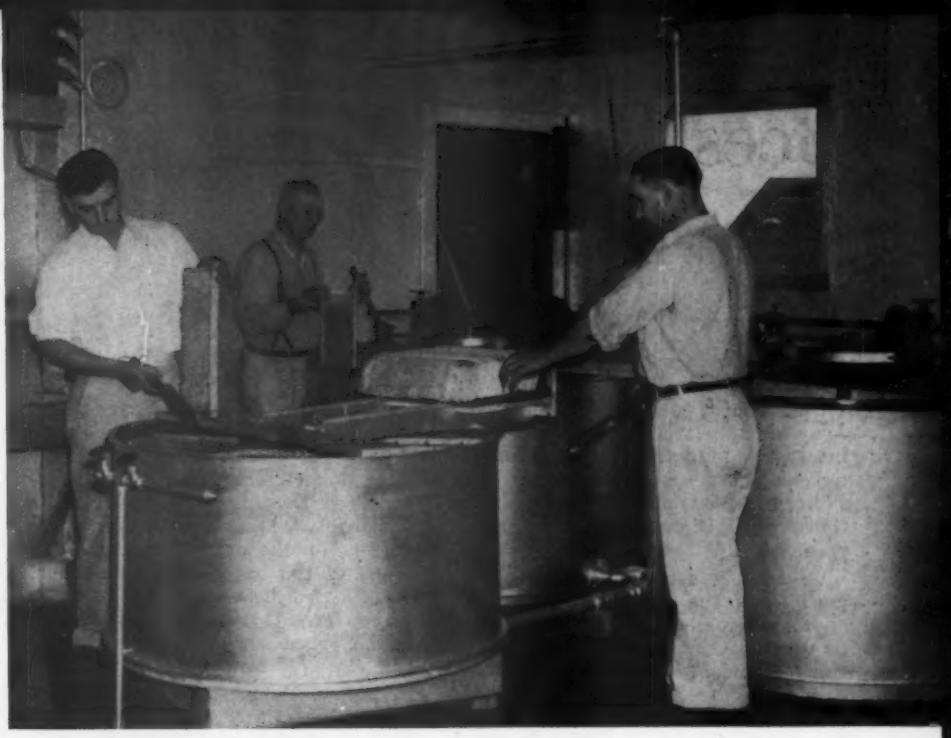
Just one yard against the skyline.

the extracting is finished, the supers are carried out to an underground cellar 24 by 40 feet, 75 feet, south of the main building. The temperature in the cellar being low, no wax moths get started in the supers.

Note that item 16 in the honey house illustration is a hoist jack used to pile up 120 pound cases of honey along the side of the drive, also used in unloading and in loading out. The two 50-frame Radials are used with individual motors and one honey pump to lift the honey to the storage tank.

Number 3 is a round capping tank with 5 large capping baskets to catch the cappings as they drop from the knife. After the cappings are whirled dry in the extractor, they are dumped on a chute to the basement to be rendered. A roll metal lift door is used at the entrance to the enclosed driveway.

—ABJ—

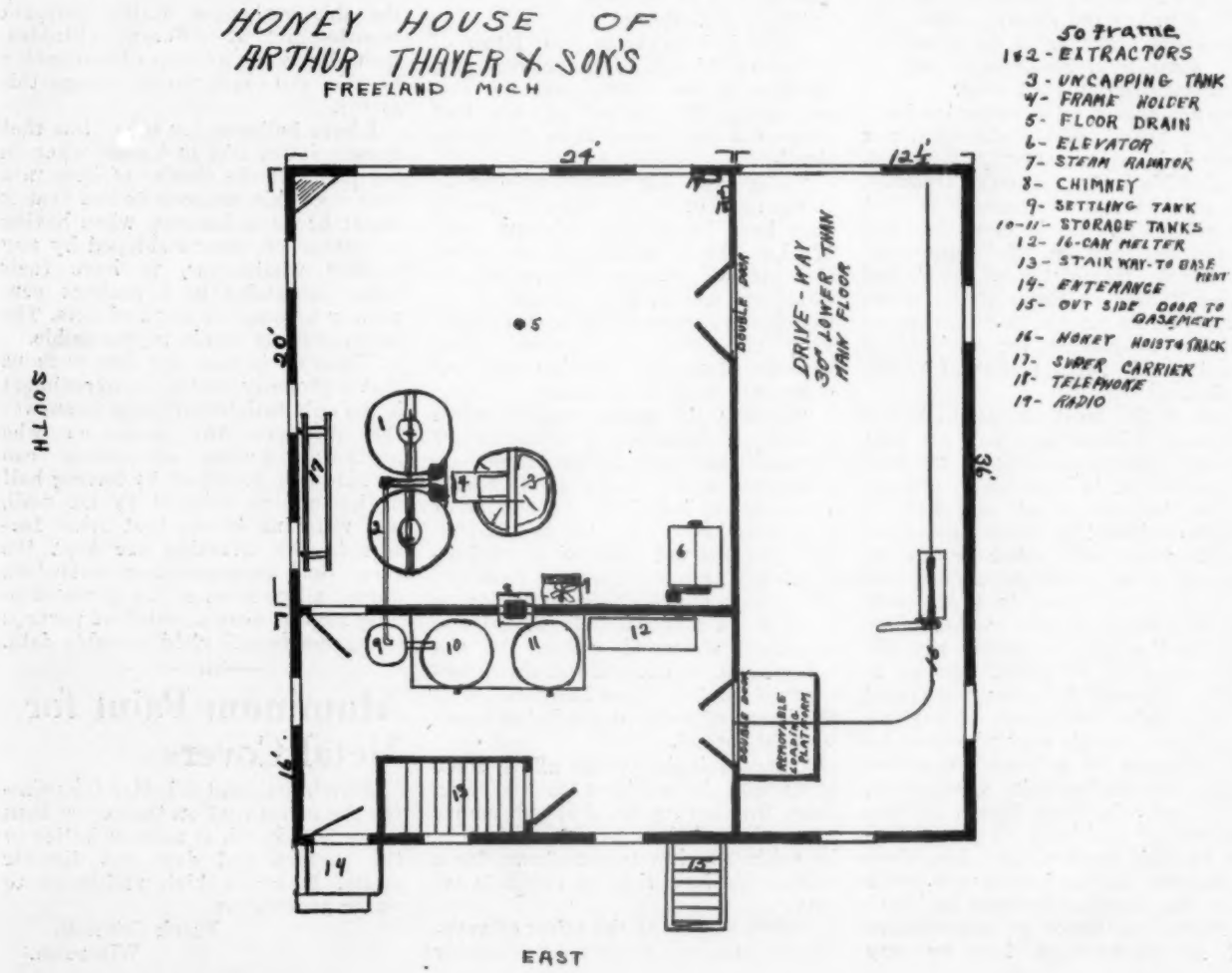


Inside the house; two Radials and a whirldry. Aluminum paint is pretty.

Light vs. Dark Honey

A customer phoned: "Paul, if you have any honey, I wish you would bring it." I took the honey and she said she didn't care for dark honey. The honey was in a round shaped jar. Later I brought the same honey in a flat jar and she eagerly accepted it. Another customer asked if my honey was dark. I said, "Not very." He thought all dark honeys were flavored. Apparently people buy honey for the color and not generally for flavor.

Paul E. Farrell,
California.



Bees By Air Mail

By Grant D. Morse,

New York.

IS it harmful to queens to ship them by air mail? This is a question that interests shippers and receivers of queens alike. Like many other questions involved in the bee industry there is division of opinion on the point.

In an effort to get reliable information on the question of whether air mail shipment is more detrimental to queens than other methods of transportation, I have questioned queen breeders, local beekeepers, the New York State Apiary Inspector, Mr. A. C. Gould, and Mr. James I. Hambleton, in charge of the Division of Bee Culture for the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture.

Briefly, the queen breeders are divided on the question, some of them having discontinued shipment by this method unless the receiver especially requests it, and then at the receiver's risk; some local beekeepers indicate no dissatisfaction, but their conclusions are drawn on a subjective basis and not from reliable statistics, nor controlled experiments; Mr. Gould, the New York State Apiary Inspector, indicates he has no knowledge that the air mail route is more harmful than other methods of transporting queens; Mr. Hambleton, of the United States Bureau of Entomology, states he has had no information that would lead him to question the advisability of using this rapid means of transmission.

One of the most successful honey producers I know personally, a man of long experience, believes air mail transportation is harmful to queens. He does not use the air mail himself and has gained his information from conversations with other local beekeepers, from reading, correspondence, and from queen breeders from the Southwest who have worked in his apiaries. He does not assume that his information is scientific, nor do I. Another successful beekeeping friend of mine who purchases all of his queens uses the air mail whenever he is in a hurry or in cases where the queens are coming quite a long way, as for example from Texas. He has experienced positively no dissatisfaction by this method. He, too, does not assume that he knows very much about the question because he keeps no record of losses or supersedure and he experiences loss by any method of shipment employed. He is, at least, able to say that he has received no queens by air mail that were dead upon arrival. Nor have I. Some of the breeders who question the safety of air mail shipment for queens, on the other hand, do so because of the loss suffered in transit, such losses being unsatisfactory to all concerned, and a financial burden to the breeder who replaces the loss.

Mr. A. C. Gould, Apiary Inspector for New York state, indicates no knowledge of any greater loss by this method of shipment than any other, and this would be reassuring were it not for the fact that the majority of beekeepers doubtless do not have queens sent by air mail.

Mr. James I. Hambleton, in charge, Division of Bee Culture for the United States Bureau of Entomology, writes me, in part, as follows:

"Dear Mr. Morse:

"This is in reply to your letter of February 24 asking for information relative to the article you are preparing on 'The Effect of Air Mail Shipment on Queen Bees from the South.'

"This office has no information as to the number of shipments of queens that have been made via air mail. We have heard nothing to the effect that air mail shipments were not satisfactory, and in the absence of unsatisfactory reports, have concluded that the shipments were going through successfully or that very few shipments were being made.

"During the usual months when queens are in transit, it would be our opinion that the temperatures encountered in air travel would rarely be a serious handicap. The effect of low temperatures on queens is a subject that has not received careful attention. There are records, however, of queens having been kept for as long as 24 hours at 34° F. without apparent abnormal effect. On the other hand, an exposure at this temperature for 3½ hours has resulted in the brood of such queens being somewhat abnormal.

"Since shipping cages afford some protection in addition to the mail bags, the chances are that only under unusual conditions would a shipment be subject to low temperatures for a sufficiently long time to result in injury.

"With respect to the effect of varying air pressure, there are practically no data on this subject. Bees have been kept in mountainous regions, however, at altitudes up to 10,000 feet. Usually bees do not fare well at such altitudes owing primarily to the cool temperatures. Under experimental conditions bees can be kept at reduced atmospheric pressure for varying lengths of time without any apparent ill effect although there are no data on this that we can quote. The altitudes ordinarily encountered in mail and transport planes would in our opinion not affect the bees so far as reduced pressure is concerned."

Mr. Hambleton's excellent letter speaks for itself. His statement that "an exposure at this temperature for 3½ hours has resulted in the brood of such queens being somewhat abnormal" leads me to point out that it will be advantageous to ascertain what the temperature actually is in the shipping cages during different months and at different altitudes. Quite likely the number of companion bees in the cages would change this factor.

I have believed for some time that queens suffer less in transit when in the midst of the cluster of bees in a package. This suggests to me that it might be advantageous, when having a number of queens shipped by any method whatsoever, to have their cages suspended in a package containing a pound or more of bees. The increased cost would be negligible.

When all is said, the fact remains that a properly controlled experiment is the only satisfactory way to answer the question. Any beekeeper who purchases queens extensively can provide help to others by having half of his queens shipped by air mail, and watching to see that other factors in the situation are kept the same. Such an experiment carried on during all or most of the queen-shipping months over a period of perhaps two years should yield valuable data.

———ABJ———

Aluminum Paint for Metal Covers

Aluminum paint is better for painting the metal roof on the covers than white lead in oil. It adheres better to the surface and does not discolor easily. It has a high resistance to water penetration.

Frank Johnson,
Wisconsin.

FOR THE WOMEN

BY EVA STEWART

Attention All Auxiliaries

Your cooperation is needed in letting other auxiliaries know what you are doing. Why not sit down right now and write a report of that last meeting at which you had such a good time and send it to me.

* * *

Wayne County

The Ladies Auxiliary of the Wayne County Beekeepers Association of Michigan held a meeting on August the 3rd at the home of its secretary, Mrs. Walter Becker. Thirteen ladies were present, we are not superstitious but we will say, rather lucky to have Mrs. Malitta F. Jensen from the American Honey Institute and Professor R. H. Kelty from Michigan State College with us. Mrs. Jensen who is always ready to help the ladies, gave us some helpful information for our Honey Cookery contest to be held at the Michigan State Fair.

* * *

Michigan Fair

At our Michigan State Fair held September 3rd to the 12th we again had the pleasure of having Miss Mercedes Cranston from the American Honey Institute with us. We used the little leaflet "Its a Honey" to introduce ourselves to the public, and also with samples of the honey baked ham, nut bread and pickled beets.

The ladies who so kindly offered their service in assisting Miss Cranston were Mrs. J. Baetz, Mrs. J. H. Campbell, Mrs. John Herr, Mrs. R. V. Nickell, Mrs. E. Godfred, Mrs. Morgan and Mrs. A. Blakley. (There was a honey cookery contest but I couldn't find out who won the prizes.)

ABJ

Seasonal Suggestions

WITH Thanksgiving just around the corner it is hard for us to think of anything except the Holiday dinner that we must prepare for our guests or maybe just for our family.

Turkey and dressing are usually thought of as a necessity for a Thanksgiving dinner but for the smaller family it is too impractical but the Star Ham "Mediterranean" would be a very suitable substitute. Of course there must be a relish for the meat. Try "Cranberry Relish" and you will find that it is easily made and very tasty.

Sweet potatoes seem to fit in with the Holiday dinner so I am sure you will like Honey Filled Sweet Potatoes. The choice of other vegetables or of a vegetable will be up to you, but in cooking them try one teaspoon of mild flavored honey to each cup of vegetable.

The salad has not been mentioned but it has not been forgotten. The salad must be crisp. A plain head lettuce salad with "Honey French Dressing" could be easily made and could be kept crisp.

For the dessert have Honey Baked Apples topped with whipped cream and a drizzle of honey.

The appetizer, relishes, rolls, beverages, etc., have not been forgotten but you may have your own ideas about them.

Following are recipes for any of the mentioned dishes:

While baking the turkey baste it with 2 cups of water and ¼ cup of **honey.** The dressing can be made from your favorite recipe or use the recipe for the stuffing of the ham.

Star Ham "Mediterranean" for the smaller family.

Purchase 2 slices of Star Ham, either thin or thick, depending on the size of the family. For the dressing use 2 cups of bread crumbs, ½ cup of **honey,** ½ cup of seedless raisins, ½ cup crushed pineapple, ½ cup chopped walnuts. Spread dressing between the slices. Ring fat edge with cloves and bake in covered dish for 1 to 2 hours at 300 degrees F. Time depends on thickness of ham slices. Uncover baking pan last 15-20 minutes.

Cranberry Relish

1 cup of **honey,** 2 cups of cranberries, 1 medium orange. Wash whole orange and cranberries, put them through the food grinder. Blend ground fruit with honey. Let stand 24 hours before using. **Do not cook either before or after grinding.** More honey, up to 1-3 cup maybe added if a sweeter relish is desired.

Honey French Dressing

½ cup salid oil
¼ cup honey
1 tablespoon salt
1 teaspoon mustard powder
2 teaspoons paprika
¼ cup vinegar
2 tablespoons catsup
2 tablespoons lemon juice

Blend **honey** with dry ingredient, add catsup and lemon juice and then vinegar and oil. Beat well with egg beater. Place as much on fresh crisp head lettuce as desired.

Honey Filled Sweet Potatoes

Select medium-sized sweet potatoes. Boil until tender. Peel, scoop out the center and chop it fine. Mix in salt, pepper, chopped green pepper, minced onion, and enough **honey** to hold the mixture together. Refill the potatoes. Place on a baking sheet and dot with butter and brown sugar. Bake in a moderately hot oven, until heated through.

Honey Baked Apples

Bake apples with a small amount of water and butter until tender. Remove from oven, drizzle **honey** over hot apples. When ready to serve top the apple, with whipped cream and a drizzle of **honey.**

Wayne County booth with Mr. Kocsis, president of the Wayne County Association and Eva Stewart.

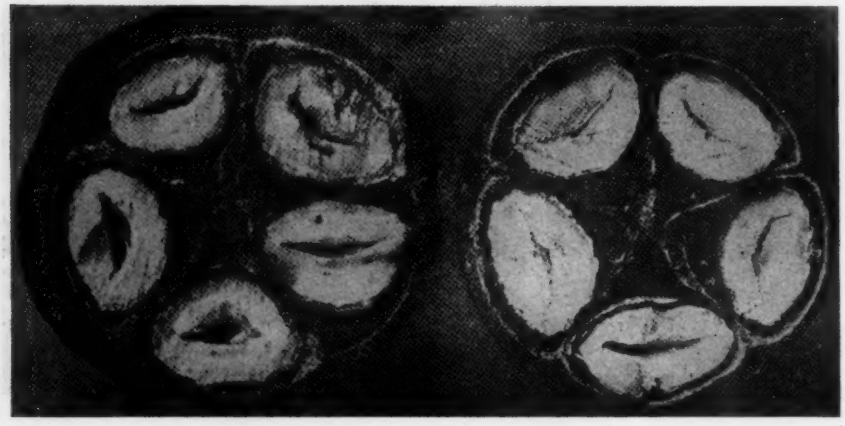
At left, Belle Pering under two year old Tung oil tree. Right, same tree in full view.

Tung Oil Production and The Beekeeper

By Alfred H. Pering,
Florida.

A COMPARATIVELY new and important industry for the United States is rapidly becoming well established within the southern tidewater regions of America, that is, the planting of tung trees and the extraction of the oil from the fruits that these trees bear. The sections of the United States best suited to the growing of these trees, which have their native home in various provinces of Old China, are in those states having a more or less tropical or semi-tropical climate; hence the early importation of either the seedling trees or the planting of the seeds or nuts, occurred in the southern section of California, from whence spread other plantings through the efforts of the Agricultural Experiment Stations, to the southern Atlantic seaboard states and to those states bordering the Gulf of Mexico.

In the spread and early establishment of this interesting and promising industry, the state of Florida has taken a leading part, and now has quite an extended acreage of tung tree groves. The oil, as the main product from the nuts of these trees, is used extensively as the waterproofing element in all kinds of paint and varnishes.



Cross section of tung oil fruit.

In the early period of the establishment of the industry in Florida, the oil produced was shipped largely to Cleveland, Ohio, and other large cities where paint factories were located. Later on, as the volume of production increased, paint factories were built in Florida as branch factories from the North, or by new capital invested by independent capitalists; especially was this feature of the rapid development of this new and promising industry noticeable following the ingenious inventibility by American workman, of machinery especially designed for the sole purpose of extracting the tung oil.

An American machine, operated by one workman, produces as much oil, but of a higher quality, as can be produced by forty Chinese laborers by ancient methods. The Chinese method of extracting the oil for some four hundred years has been to place the pulp from the hand crushed nuts in a hollowed log and a piece of timber shaped to fit the cavity in the log was forced up or squeezed against the pulp, by wedges driven between the

whole contraption set between stakes planted deep in the ground.

The total producton of tung oil within the United States is reliably reported to have been something over two million pounds for the year 1936, in which Florida leads, Mississippi and Louisiana following; there being three oil-extracting mills located at Gainesville, Florida, and one at Bogalusa, Louisiana. China exported in eight months one hundred and seven million pounds, the greater portion of which came to the United States.

The demand for this oil seems to be insatiable, and will be for many years to come, as the active researchers in the laboratories of the paint and varnish manufacturers are constantly finding new and important uses for this tree product, as in linoleum, oilcloth, printer's ink, insulation in electrical goods, and many others; a very important one being its use to coat airplane wings to prevent the accumulation of ice or sleet while flying in high altitudes.

The tung tree possesses some peculiar characteristics. The fruits or nuts are borne on the tips of the limbs of the previous year's growth and bloom appears several days before any leaves are put out. A tree in full bloom is a very beautiful sight; so much so that the temptation to passing northern tourists to gather large bouquets seems well nigh irresistible. The writer has had plantings alongside the street on his residence lot just about ruined and trees badly damaged by these thoughtless people, who when accosted, said they did not know what they were, and what damage they were unintentionally doing.

Live stock will not browse the trees as there seems to be some repellent odor in the leaves. After the tree reaches a sufficient height and strength, the tung tree groves can be safely grazed by any and all kinds of farm stock. The nuts or seed cannot be eaten by either man or beast as the kernel seems to contain some sort of an ingredient that will render one deathly sick, and acts as an overdose of a compound cathartic. Many children and oldsters too have experienced some very unpleasant sensations, but the writer has never yet heard of any fatal results. It is known, however, that animals that burrow in the ground will succumb. The writer has found dead moles, gophers and rodents nearby where he found the empty seed hulls he had planted. The writer has produced several thousand seedling trees for setting in groves. Losses from ground burrowing animals are the greatest, although one of the most annoying experiences was to have a "litter" of very small pigs root up the seed and leave them to dry and die on the surface in the hot sun.

Tung seed of the current year must be used for producing trees, and in this part of Florida should be planted not later than about the 20th of March. The time required for germination varies with conditions and sometimes takes as much as three months. After a number of trials and experiments, I have found my most successful method is to wait until the ground begins to warm near the surface, then, after cleaning all rubbish and vegetation away, spread a canvas or gunny sacking on the ground on which a thin layer of the seed has been sowed, after they have been soaked in luke warm water for a couple or three days. Cover with canvas and over all spread about three inches of earth.

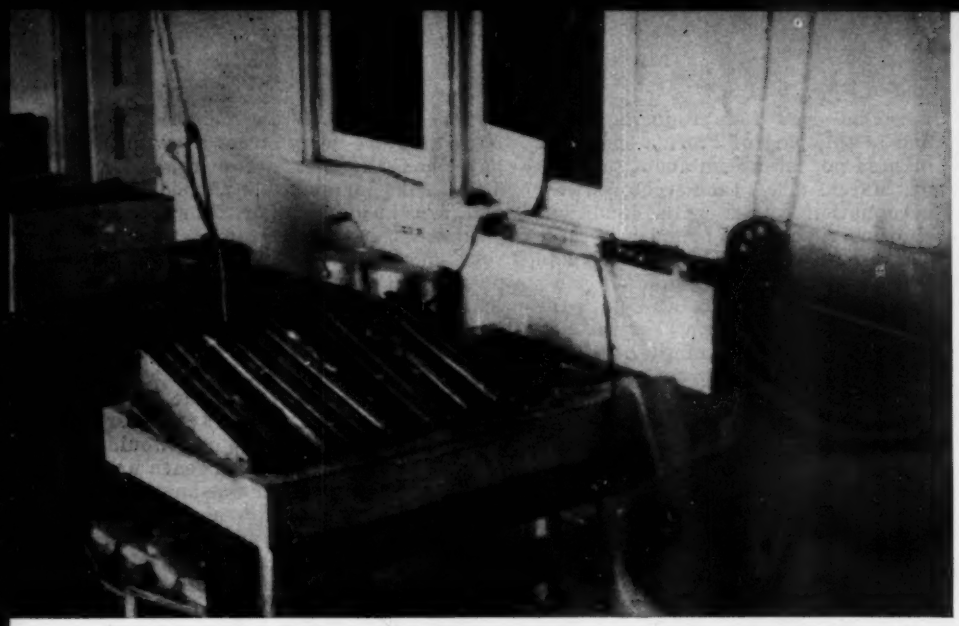
Keep this seed bed damp or wet. Locate the bed in the broad sunshine and if cool nights come, cover while warm with blankets. In this way, I have had as high as ninety per cent germination. By lifting the canvas, at about the time you think the seed should begin to swell or even show a small sprout, one can tell when is the best time to place the seed in the nursery, or better still, plant the seed that has begun to germinate, right where you want the tree to remain permanently; in other words plant these sprouting seeds in grove form.

As for myself, I do not want a transplanted tree. I would not accept one as a gift. The tung tree grows a tremendous taproot and no difference how careful one may try to be, injury to this taproot cannot be avoided in transplanting. To prune the taproot is folly. It is never regrown. Other roots may be sent out and downward, but they will never take the place and do the tree the same good as the taproot would have done, had the seedling tree never been disturbed. As an experiment or to investigate, I have selected a seedling no more than eight inches high above ground and not more than three months old, soaked the soil with water around it for a sufficient time until the little tree could be drawn up intact and found a taproot four feet in length and as small as a coarse horsehair near the tip; very, very few side roots and they all near the surface of the ground. To cut away that taproot is certain injury, and it is difficult to make such a tree grow when transplanted. The older the nursery tree, the more certain they are to survive transplanting, but they are all the more injured and set back and will never catch up and bear equal to the tree that has never been disturbed after the seed sprouts.

Tung trees should never be pruned, unless something has happened to them that demands shaping up in order to make the tree-head balance. The top or what I call the heart bud, should never be removed. If this heart bud, the center growth leading straight upward, is ever cut away, there is never anything that can take its place, even though a limb tries to. Near here are many street trees that have had this heart bud removed. They make an umbrella shaped tree and are nice shade or ornamental yard trees, but their crop of nuts is very much reduced. In my early experience, I have had nursery trees sent me that had the taproot removed and the top of the tree cut back for shipping. Such trees required careful nursing to make them live. The heart bud being gone, a limb or side shoot tried to take its place and if all other limbs were removed this one would form a sort of hip and then reach upward, but the tree never was anything but a limb trying to grow into a tree. Such a tree never will and never can produce the crops that it could have had it never been transplanted. After what experience I have had, I will emphatically say that it does not pay to set a grove from a nursery, no difference how low in cost or how old the trees. Tung tree seed is too cheap and successful methods been found for handling the seed so as to get a very high percentage of germination, so that I do not think transplanting is advisable under any circumstances. Under the methods practiced when I first became interested in producing trees, it was considered a success if one secured thirty to forty per cent germination of seed in the nursery and about an equal percentage of live trees after transplanting.

The common practice is to set the trees in grove form, twenty-five feet apart each way, but thirty feet apart in the row and the rows twenty-five feet apart with the trees staggered is better. This will give a planting so that all trees are approximately thirty feet from each other, even though the rows one way are but twenty-five feet apart. Cultivation between the rows is permissible while the trees are young and small. Of course such farm or garden truck crops that produce nectar while in bloom are of primary interest to the beekeeper. The tung tree produces very little, if any, nectar. The tree is, however, a very early bloomer and a pollen bearer. Early sources of pollen are of great importance, as early brood rearing is essential to early building up of the colony to surplus storing strength. The tung tree is rated as self pollinizing, but the honeybee is without doubt, an assistant agency in pollen carrying from bloom to bloom, and will assist in a greater set of fruits and a consequent increase in the number of nuts from which the oil is extracted.

Further information may be had by those interested, from the publications issued by various Agricultural Experiment Stations located in the southern sections of the country and at Washington, D. C. There is little doubt in the mind of this writer, that successful **Tung oil** and **honey** production can go well hand in hand together.



Draining box, power uncapping knife and part of extractor, in a small installation with two-gallon boiler on oil stove.

Honey Getting

SECTION II

Part VI

Steam and Power Supply

By E. L. Sechrist,

Tahiti.

An ordinary 4 to 6 H. P. vertical steam boiler gives good satisfaction and will supply steam and hot water for heating the honey house warming filled combs, heating capping knives, warming honey, melting cappings, etc.

A connection at the bottom of the boiler should be provided, in addition to the regular steam outlet, so that, at the end of the day, the hot water and steam remaining in the boiler may be utilized to give everything a thorough cleaning.

Where gas is available, a burner of the coil type with a boiler, such as may sometimes be purchased at a reasonable price from some steam clothes-cleaning establishment, gives excellent service and provides steam quickly within the limits of its capacity, and is sufficient for a small plant.

If a separate boiler is used for uncapping knives, a 5 gallon size is to be preferred to a smaller one.

If an oil stove is used for heating anything in a honey house, a type should be chosen in which the flame will not creep up higher as the stove becomes hotter. Many fires have been caused in honey houses through using a stove which burns high and deposits soot if not watched carefully. Many fires also originate because of wax boiling over on such a stove. It is a good rule that no oil stove should be burning and that no wax should be over a fire except when someone is present and continually on the watch.

The steam gauge for the boiler, as has been mentioned before, should be located where the chief operator can see it at all times from his working place when extracting is going on.

Electric motors are most satisfactory as a source of power where available, but gasoline engines serve very well. In a large plant, unless separate motors are used, a line shaft with fast and loose pulleys is advisable.

Uncapping Knives.

Uncapping may be done with a cold knife if the honey is warm; by a plain knife heated in hot water; with a steam heated hand knife, or with a steam heated power knife. There probably will be developed satisfactory electrically heated knives. Such as I have seen work very well if the work is not hurried; but if rapid work is to be done, such a large electric heating unit is required that, immediately the knife is out of use for a moment, the film of honey on it begins to bubble and burn unless the current is switched off.

As things stand at present, steam heated power knife may be confidently advised for extensive operations. Some early power knives were defective mechanically, but the later models are fairly durable, although a type should be selected which is mounted firmly and strongly, with good bearings which will remain in alignment.

While an expert operator with a steam heated hand knife will do as much work as can be done with a power knife, the ordinary or inexperienced operator will do more and better work with a power knife.

If a steam knife of any kind is operated from a large steam boiler where the steam has several pounds pressure, some provision should be made for an expansion tank in the steam line, othewise the steam jacket of the knife may break loose from the steel blade at most inopportune time. A two-gallon steam boiler such as that is often used to supply steam to the usual hand-power knife serves well for this expansion tank and prevents irregular pressure from breaking the knife.

More of the offset, Bingham type, of uncapping knives are in use than of any other kind, but an increasing number of operators prefer a heavy, strong knife with a straight handle. I have a knife of this type made of stainless steel. This kind of knife may be used either cold or steam

heated and is used with a downward stroke instead of the upward stroke used with the Bingham knife. The fastest uncapping I have ever seen done has been with a straight knife and a downward stroke.* After first cutting upward a little more than the width of the knife blade, at the upper end of the comb, a twist of the blade throws off the slice of capping and leaves the knife in exact position for a slashing down stroke through the rest of the comb, cutting off the comb and honey down level with the wood of the frame. Cutting off first, on an upward stroke, this small slice of comb, makes it possible to give a quick downward stroke with the knife without having to bother to begin at an exact point on the comb. The operator has about two inches in which to strike the comb and get into action. Many beekeepers work out little details similar to this which are very valuable but are seldom passed on to others.

Various tools and machines for uncapping have been invented. While these work well in the hands of the enthusiastic inventor, they do not come into general use. Most if not all of them have some weak point due, usually, to irregular comb surfaces and the peculiarities of beeswax in regard to softening or becoming brittle and flaky. Where some sort of rotary drum, with springs or teeth, or cotter pins, is used instead of knives for removing cappings, rapid work may be done on irregular combs, but the particles of wax are so finely broken up as to make it difficult to remove all these bits of wax from the honey drained from the cappings. All of us, I think, are looking forward to the day when a perfect uncapping machine will be invented as we are to some sort of a Utopia.

Comb Box or Tray and Revolving Comb Racks.

When uncapping is done into a box or tank, a place must be provided for combs until the operator is ready to receive them. Too often some makeshift affair is used.

Most capping melters, where they are used, provide a space for hanging uncapped combs but the majority of operators do not use capping melters and therefore require some sort of comb tray or rack. If a large box is used as an uncapping box, it may be made the right width for hanging combs in it as they hang in a hive but with two uncappers at work there is seldom room to spare. And so some kind of separate box is provided.

One useful development for the purpose has been dubbed a "tea tray" because its legs are provided with casters on which it may be moved about readily. It is a long box or tray about the same depth as an uncappng box and has a galvanized iron bottom, curved and sloped so the honey will drain toward the desired outlet. Being on casters, it may be moved easily to the most convenient location to serve either one or two uncappers and the operator of the extractor. * *

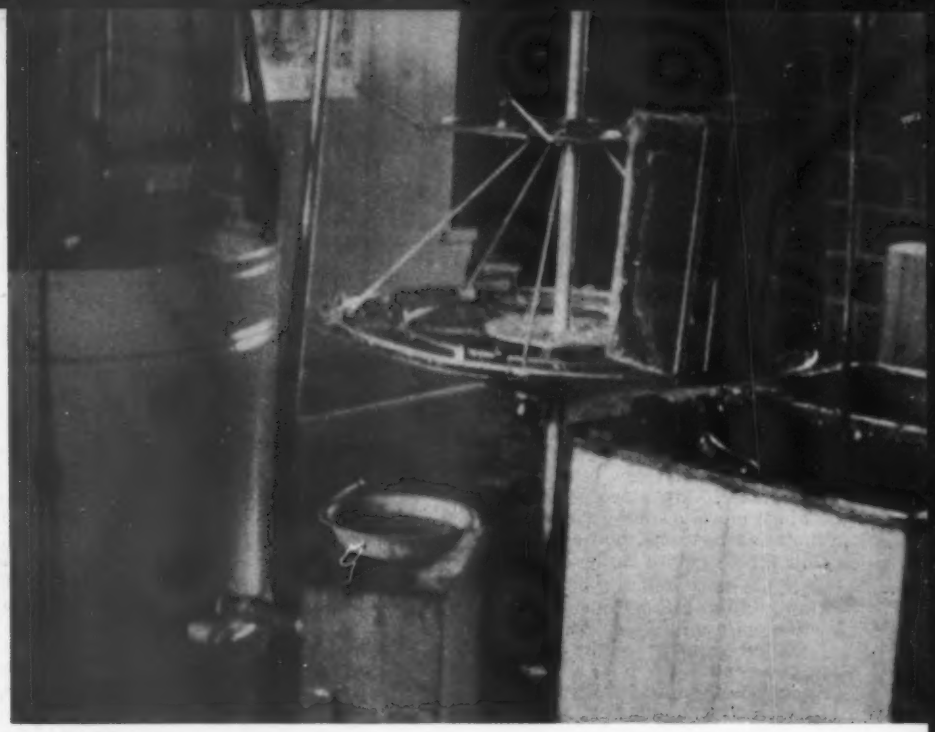
For rapid work, a comb tray elevated to the same level as the top of the extractor has some advantages. Also, for shallow frames, it is convenient to arrange the tray so that the combs may be stacked two tiers high.

Some operators who do rapid work do not use a comb box but simply toss the combs quickly to a half standing position against a wall or a board or shelf near the extractor, but too many good combs are damaged in this way to justify such makeshift operations although a careful worker can pick up two or four empty combs at one time without damaging them, between his flat hands when replacing combs in the supers after they have been extracted.

What seems to me to be the best comb rack is acquiring many adherents, particularly where the large radial extractor is used. This is a revolving rack, consisting of a shallow, basin-like inverted galvanized iron cone, about 38 inches in diameter, with a central vertical shaft, to which it is attached, extending from floor to ceiling and pivoted in blocks so it may rotate. This shaft carries, above the tray which catches dripping honey and has a corked outlet for draining it, a skeleton rack of iron rods which carries 45 combs in 5 spaces, 9 combs in each space. This apparatus has the advantage of being very compact, occupying little floor space, and of being turned easily so that the desired empty space is always within easy reach of the uncapper's hand. It should be abundantly strong to carry the weight of heavy combs, and is located between the uncapping box and the extractor with the edge of the drip cone slightly overhanging the uncapping box to catch any drip as the combs leave the uncapper's hands.

The revolving comb rack is a great convenience when, in combating A.F. B. it is desired always to return the combs after extracting to the hive from which they came. The eight or nine combs from one super occupy one space in the rack and the supers may be so piled that each lot of combs can be returned readily to its numbered super. This rack will be illustrated and discussed in the section on Apparatus.

ABJ



Extractor at left with riser from honey pump. Revolving comb rack overhanging uncapping box which is used by two uncappers with hand steam knives. The steam line drops from overhead. A pipe drains honey from uncapping box to extractor.

Idaho Crop Below Normal

The Idaho crop, according to a recent survey, reveals surpluses from 30 to 60 per cent of normal and some as low as 10 per cent. The bees made a living and that is all in some sections. The honey was not as white as usual. Some beekeepers moved to fall sources to secure sufficient food for winter.

Glen Perrins,
Utah.

*Lately the steam uncapping plane is assuming importance. Some operators prefer the two-way steam-heated knife. Some prefer the newer steam uncapping plane. —Editor.

**New types of capping melters lately offered, like the Woodman and the Brand melters, will undoubtedly replace the old style melters heated from below.—Editor.

Dangerous Practice

The danger which attends the common practice of moving bees by truck in unscreened hives is mentioned in a letter received from H. E. Weisner of Tucson, Arizona. He remarks that few beekeepers who move bees on a large scale make any attempt to confine the bees to the hives. "They merely smoke them at the openings, after having fastened bottoms, bodies and covers, load them on trucks and try to get to their destination before daylight."

If all goes well the beekeeper may save a little time by this method but he does so at the risk of great inconvenience or loss in case of accident. A stalled truck on a well traveled highway might be the source of considerable annoyance to the public, when the load was unconfined bees. Such a happening in the day time might well result in very serious consequences.

The cost of moving screens is not excessive and the time necessary to confine the bees is so little that it would seem that the beekeeper can hardly afford to take chances on moving unconfined bees along crowded public highways. Our correspondent calls attention to the fact that a serious accident may result in severe restrictions on moving bees along the highways. It often happens that an entire industry suffers because of the carelessness of a few individuals.

Where bees are moved for short distances along little frequented roads the beekeeper risks little aside from his own property and person but along well traveled highways he is bound to respect the interests of the public as well as his own.

—ABJ—

Market Weakness

It too often happens that some unusual incident determines the price of agricultural products rather than the size of the crop. As an example this year's honey supply is unusually short and conditions indicated a substantial advance in price.

It so happened that one of the large packers of food products had become interested in honey and had accumulated a large supply from last year's crop. At the critical time they decided against adding honey to their line and threw all their stock, over a million pounds, on the wholesale market.

The sale of this large stock of honey at a figure below last year's current price, tended to depress the market at the time when the price should have shown a rising tendency.

It seems probable that supply and demand determine the usual price range but unusual accumulations thrown suddenly on the market may supply the immediate demand in such a way as to destroy the opportunity for the producer to get the advantage which is his due because of a short crop.

With this stock removed there are indications of higher prices but they will hardly reach the level which otherwise might have prevailed for this year's output.

—ABJ—

Pollination of Red Clover

On page 506 of our October issue, L. F. Childers expresses doubt as to value of bumblebees in the pollination of red clover. Because of the large number of flowers he doubts whether there are ever enough bumblebees to do the job.

That is exactly the trouble with red clover in recent years. There are no longer enough bumblebees to visit all the red clover flowers and the seed crop fails as a result.

As to his suggestion that pollination is affected by the wind there can little credit be given to that statement. In plants like Indian corn which produce pollen in large quantity above the pistil bearing organs, wind pollination is effective but not in flowers like those of clover.

Probably no plant has been more carefully studied than red clover in its pollinization. Numerous investigators have screened plots of red clover and found the blossoms self sterile when insects were excluded. In North Dakota L. R. Waldron found that slightly more than two per cent of red clover blossoms were fertilized by butterflies and other insects but that when bumblebees were placed in the screened enclosure 47 per cent of the heads set seed. His experiments indicated that 95 per cent of the red clover seed produced in North Dakota was the result of bumblebee visits.

Honeybees are able to fertilize the blossoms but are not attracted to the flowers in many localities because their tongues are too short to reach the nectar. The value of the new Zofka red clover lies in the fact that its flower tubes are much shorter and the honeybees are attracted because they are able to reach the nectar. In our experimental plot the heads set seed very freely, many heads having more than a hundred seeds due to the presence of honeybees. Without bees there would have been few seeds set.

—ABJ—

Honey and Hay Fever

Word seems to be getting around that honey may be of help to patients suffering from hay fever. At least there have been numerous inquiries from victims of that disorder who hope to find some measure of relief by its use.

We are led to refer to the subject because of the fact that an acquaintance has reported favorably on the use of honey for hay fever. He states that his wife who has suffered seriously from this ailment is able to find relief by the simple expedient of eating honey produced in the immediate locality. The particular pollen which is the exciting cause in this case is not apparent but it seems to be some plant which local bees work freely.

We are told that eating honey is not likely to be of help unless the bees have visited the blossoms of the particular plants which cause their discomfort.

Doctors suggest that if there is any merit in this remedy it is likely to result from the continued use of honey for some time in advance of the hay fever season thus giving time for consumption of considerable pollen before the irritation is set up.

Should reports such as the above become general it will result in a large demand for honey on the part of hay fever patients. It will also encourage the use of honey produced at home. Hay fever is a very common ailment during late summer and the report of one patient who finds relief will encourage others to try the same remedy.

We would caution beekeepers against promising too much for honey as a hay fever remedy. There are too many plants which cause hay fever which are not attractive to the bees to expect that general dependence can be placed upon it.

—ABJ—

Unusual Bee Pastures

Here and there is a locality which offers a special opportunity to some beekeeper to get good crops of honey from sources not usually available. Such a pasture was within reach of the late G. M. Doolittle in the years when Fuller's teasel was raised in a limited area in New

York. The heads of teasel have hooked points which were at one time largely used for raising the nap in the manufacture of woolen cloth. More efficient methods have since displaced the use of teasel and its cultivation has been discontinued.

Fifty years ago Doolittle enjoyed a measure of prosperity because his neighbors were cultivating teasel. In 1886 in this magazine he reported an income of $1,000 per year from less than 100 colonies of bees credited in part to teasel.

In the seed belt of California some beemen get crops of honey from celery, parsnip and other vegetables. In New Mexico there is a small area where the bees work on Syrian bean-caper freely. It is reported as rich in honey but has not been reported as present elsewhere in the United States.

In nearly every state we can thus find some spot where the beemen find something which provides amply for them but which others are not in position to enjoy. Because of their limited distribution such plants may be easily overlooked and the beekeeper fail to make the most of the pasture within his reach.

A thorough knowledge of the honey plants of the region is an essential part of the education of every beekeeper which too many overlook.

———ABJ———

Is Sweet Clover Going Out?

Reports are coming to us from many localities to the effect that sweet clover is on the decline. In some cases it has already been reduced to such an extent that the beekeepers have been compelled to seek new pastures elsewhere.

That this is no mere local condition is evidenced by the fact that similar reports come from widely separated localities. Such distant points as Kentucky, Alabama and Colorado tell the same story of neighborhoods where sweet clover, once the mainstay of the beekeeper, has nearly disappeared.

As to the reason, however, we find a variety of explanations. In some cases the cause is due to a change in farming methods whereby sweet clover is succeeded by some other crop. In other cases it is charged to grasshopper injury, as in some Colorado localities, where it is said the young plants are consumed by the insects. In still other cases it appears that the lime content of the soil has been reduced to the point where sweet clover will no longer succeed.

For whatever reason, the decline in sweet clover is a serious matter for the beekeeper. To change one's location and seek a new field of operations is no light matter after one has spent years in building up a business in one spot.

A large portion of America's commercial honey production has been built around sweet clover and most of the dispossessed beekeepers have sought new locations where the plant is still abundant, rather than to look for other bee pasture.

One prominent beekeeper of the writer's acquaintance, who has moved twice in thirty years on account of the changing status of sweet clover, contends that the plant is nowhere permanent but that it thrives in a locality for a few years and then declines to an unimportant position.

Many beemen who depend upon this plant for their crops are anxious to know what the future holds. Such changes have already come to those who depended upon basswood and several other plants.

———ABJ———

Protect the Public

The newspapers of August 24 carried black headlines on the front page telling of the death of a six year old boy from bee stings. Such incidents, fortunately, are rare and usually result from conditions over which the beekeeper has no control. When they do occur, however, they serve to create an unreasoning fear on the part of persons who are unfamiliar with bees.

We who spend our working days with the bees come to regard a sting as an unimportant incident and perhaps, at times, we are a bit careless in our relation to the public. Such an incident as the above may well serve to call our attention to the need of placing the apiary in a sheltered location as far away from human activity as possible.

Every beekeeper can recall some incident which has stirred up the bees to the point where they went on the warpath and stung everything in sight. As such times dogs, cows, even chickens suffer unpleasant consequences and results may be serious. Things may go along smoothly for years with no disagreeable happening when some untoward accident may cause trouble in plenty.

It is better to put up with much inconvenience in waiting a favorable time for apiary manipulations rather than to stir up the bees when they are in an ugly mood.

We have commented on frequent occasions regarding the necessity of providing water supply which will attract the bees away from neighboring water supplies and placing the apiary where passers-by will not be endangered. At best an occasional serious accident will happen, but the beekeeper should do everything possible to avoid such an occurrence.

———ABJ———

Public Objects to Poison

The public is beginning to object to the wholesale application of poison in the control of insect pests. A recent issue of Consumer's Digest discussed the subject at length and suggested that the consumer has an interest which must be respected.

It was contended that the effect of poison, taken in minute quantity through the consumption of fruits and vegetables which have been sprayed without having been washed, is cumulative and may eventually result in serious consequences.

Fruit growers are now required to wash apples to remove the poison residue which follows the spray and regulations for removing poison from other products of orchard and garden have recently been announced.

Such public attention to the matter of poison used in the control of insects may result in regulations which will insure that any application will be made in such a manner as to protect the bees and other animal life while protecting the public health.

It is hard to see how insects can be controlled under present conditions without the use of poison but the public has certain rights which must be respected. The wholesale application of poison by means of the aeroplane has been followed by serious complications in so many cases as to arouse public interest to an extent not previously noticed.

The consuming public has become suspicious of the use of poison in such wholesale quantity and proposes to take steps to make sure that no residue remains when the products come to the consumers' table.

Such public consciousness will make it much easier to insure that the beekeeper will get a hearing when he complains of the loss of his bees through the careless application of arsenates or other poisons.

———ABJ———

Soy Beans

It is unfortunate for the beekeeper that the soy bean is not a major honey plant. It is growing in importance in American agriculture at a surprising rate and in many neighborhoods is replacing other forage crops.

Recent developments are of interest to the dairyman as well as the beekeeper. If we are to credit recent newspaper accounts of the research work done at the Nashville Agricultural Normal Institute, the dairyman is likely to suffer real competition from products of the soy bean. Dr. Philip S. Chen, a research chemist from China, is reported to have made a milk from soy beans which approximates the qualities and flavor of that from cows. He has made ice cream from this source as well as cheese.

Soy bean milk can be produced at less cost than cow's milk and it is not impossible that as the automobile has replaced the horse on the highways of the world, so also the cow may gradually disappear from the pastures of the West.

Soy beans produce oils of wide use in industry and the list of manufactured articles to which these beans contribute is a long one.

Corrugated Paper for Packing

George Taylor, writing in a western Canadian paper under the title "Chats With Beekeepers," gives a few good rules for successful wintering as follows:

1. Adequate stores: Colonies should have at least 40 pounds of sealed stores and lacking this should be fed up to this amount early in order to enable the bees to "cure" and seal the same.

2. Sufficient bees: Each colony should have at least 8 frames, covered with bees, preferably those raised since the close of the honeyflow; old bees do not winter well.

3. Young queens: Colonies to be wintered should have queens raised during the honeyflow from selected stock, as queens which have headed colonies all summer do not start to lay eggs as early in the spring.

4. Protection necessary: Bees to winter successfully must have protection sufficient to enable them to keep the cluster at the required temperature without too much effort, otherwise too much food is consumed, and the colony dies of dysentery.

For wintering, the colonies are set in pairs and each colony is placed on top of an empty super filled with packing material with gunny sacking on the bottom to hold the material. A similar empty super is placed on top of a top entrance which is formed by cutting a 3-inch piece out of the rim of the inner cover and placing the cover on the colony with the rim side down so that the bees have a passageway above the frame and can use the top entrance if necessary. Several thicknesses of brown corrugated paper board are placed about the hives and then tar paper around it, with an opening to the packing confluent with the top entrance. He also advises shelter from the wind as absolutely necessary.

———*ABJ*———

Wyoming Boy Is Killed By Bee Stings

This is the title of an Associated Press release which has been circulating generally among papers concerning the death of Clifford Fabricius, six year old son of a Riverton, Wyoming, farmer, who died in Lander in August. The boy was found on the muddy bank of an irrigation ditch near his home at Hudson after his ten-year old brother, Harry, had staggered into the house in hysterical condition. Thousands of bees were swarming all over Clifford's body. He was rushed to Riverton where a physician removed thousands of stingers. The doctor said the boy's face appeared bewhiskered so numerous were the trailing stingers. Harry, the other brother, ten years old, although also attacked, recovered.—P-N-T Baross.

Indiana Bee Club Makes Good

J. C. ALLEN, agricultural photographer deluxe of Lafayette, sends us a picture of the agricultural vocational class of the Newport, Indiana, High School. This is the class which Indiana folks have heard so much about under the guidance of their teacher, E. W. Baker. Twenty-one boys and three girls started in the spring of 1937 to take beekeeping as a part of their 4-H Club work. It was the first bee club in Indiana and the members call themselves the "Busy Workers."

Part of the success of the club is due to the interest of the president of the Indiana association, L. R. Stewart, also of Newport, who advanced the interest of the club by loaning the time of his apiary assistant, Bob Beer, of Illinois, who helped Mr. Stewart with his bees and helped Mr. Baker with his club. All three men deserve much credit.

Dorothy Laws, the queen bee of the Vermillion County organization, is shown in this picture with the club display which won first prize in a new division established at the 1937 state fair. They also had a splendid exhibit at the Round-up at Newport.

Each club member had an average of three colonies of bees; each hive averaged $4.72 or a total of $350 for the class for the season.

"Honey Harvest"

UNDER this title in "Time and Tide," London, England, August 7, Phoebe Fenwick Gaye contemplates the honey harvest with fine language and interest. We quote from it as follows:

"With the coming of August weather . . . . viewing the world from deck-chair depths there is some comfort in seeing that one activity—that of the bee world—still persists . . . . The second honeyflow is on now; clover has taken the place of bean flowers in the fields, and lime flowers, that of the thinner-nectared spring flowers. The hives hum like small factories, even after sunset, and a thick warm smell of honey hangs over them like an invisible veil. (One good waft of that should be enough to convince anyone that the mead or metheglin of the ancients had more "kick" to it than any cocktail.) At mid-day the crush of going and coming workers at the hive entrance looks almost like the prelude to a swarm."

—ABJ—

Bees at St. Mary's

HERE are two pictures of the bees at St. Mary's College and Academy, Holy Cross, Indiana. One shows the writer and his wife and the apiary with the college in the background. The other shows a teaching sister with her pupils during one of the demonstration classes.

In 1902 I arrived in this country from Hungary where, at ten years of age, I began beekeeping under the guidance of Party Karoly, master beeman of Jozsef Foherceg of the Royal Family in Alcsuth, Verth.

On my first American "Pay Day" I bought two colonies of bees and have now two hundred fifty colonies. At St. Mary's I manage and demonstrate in this apiary, conducting also a correspondence school among Hungarian people and have published a magazine on American beekeeping in the Hungarian language.

John Toth,
Indiana.

Bees Buried in Winter

One fall I put several colonies in a cave as I did not have room for them in my cellar. I dug the cave deep enough to set two layers of hives in and left about ten inches of space in front of the hives. I put on a board roof and covered this with about ten inches of dirt. The only air that got in was through a three-inch pipe in the center of the roof and I kept the pipe full of straw all winter.

Three times in the winter I drew out the straw in the pipe and put my ear against the pipe to listen. I could hear a faint sound so I knew the bees were still alive.

I was away from home for a time and my cattle got into the orchard where the cave was and horned one end of the cellar roof open, making a hole about a foot square. Out came the bees, and my folks told me the air was full of them. I expected that I had lost them all.

In returning home I dug the cave open. No bees had clustered in the orchard, no bees were on the bottom of the cave. Every bee got back to the hives. They had hardly eaten any honey and almost every bee was alive and ready to start work in the spring. That summer they did well. I think I will try this again the coming winter. Would like to hear from others who have tried a method similar to this.

W. W. Walrath,
Iowa.

—ABJ—

Leaf Packing

In packing bees I have used the driest leaves possible around all sides and on top. I made a two inch deep box to fit the hive. Inside I put a lattice frame so the bees could go anywhere they want to. On this lattice work I laid burlap sacks cut to fit inside this box. Then the cover was put on and the packing was finished by covering with leaves. I leave the full entrance open, but the outside entrance is reduced to four inches protected with half inch mesh wire against mice. I removed the packing in May. All hives were loaded with bees bringing in pollen and honey.

August H. Zahn,
Iowa.

—ABJ—

Rajah Buys Bees

According to a newspaper clipping sent by Alfred H. Pering, of Florida, the Rajah of Travancore, has interested himself in beekeeping in southern India. He has bought several thousand colonies of bees in west Australia.

All Honey Cooky

1 cup butter
1 cup honey
2 level tsps. soda
½ tsp. each of cinnamon, cloves and allspice
3¾ cups flour (approx.)

Boil **honey** and butter together about one minute. Cool. Sift flour, spices and soda together. Add flour to make a soft dough. Roll thin, cut and bake in moderate oven for 12 to 15 minutes.

Caution—Because these cookies are thin they burn easily.

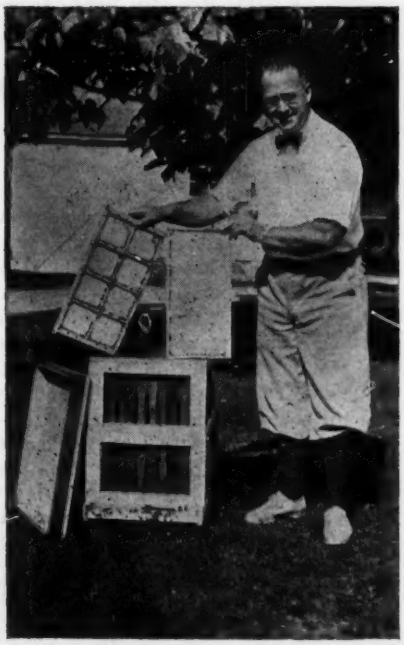
Eva Stewart,
Indiana.

ABJ

Hobbyist Hathaway

This picture is of my late husband who kept a small apiary at Mattapoisett, Massachusetts, and was an active and interested worker. We both profited much from reading your Journal.

He started to keep bees about five years ago as a hobby but later increased and put up a small roadside stand to sell honey. He was very proud of his product which was mainly clethra, or the pepperbush which grows abundantly in this vicinity, and yields a fine, delicately-flavored, almost white honey. He would open his observation hive of bees to any customer that would seem interested, and explain to them the life of the honeybee. Many customers have ex-



pressed regret at his passing and say that he was an active and enthusiastic beekeeper and honey producer.

I am endeavoring to continue the honey business, and will do my best to carry on the fine reputation that he has established.

Mrs. M. H. Hathaway,
Massachusetts.

Because I Have Bees

By Harold Luckner,

Oregon.

BECAUSE I have bees I can sell my honey readily. That has all the earmarks of a trite crack but there is a very important and regrettable principle involved. People who pass my place often stop and ask if I have any honey to sell. They can see my busy colonies near the road. And where there are bees there is bound to be honey. This is the main reason I have no difficulty disposing of my crop. The other reason is that I have a better honey than they can buy in the stores. My supply comes from raspberries. This is a water white honey, medium body, very mild and rich. It is not available in the markets as a rule. So far as I am concerned there is no better honey and darned few as good.

This is all to the good as far as we have gone. The unfortunate part is that people who do not actually see the bees or know that I own any are often suspicious. Just last week a man, who had been watching me work my colonies, remarked, "There is plenty of honey in the stores but the question is how much of it is honey."

I explained that it is all honey, that adulterated honey simply doesn't exist any more. I told him that such honey adulteration is easy to discover. That it would hardly pay a beekeeper to try such a stunt and that Uncle Sam won't stand for any of that kind of monkey business. I wound up by saying I doubted very much if there ever was much of it done, that it existed only in the minds of those of us who are skeptical of everything and in the minds of a few who had seen apiarists feeding their bees sugar syrup and hadn't bothered to find out why. I guess I convinced him because he tried to save his face by saying that undoubtedly honey in the comb direct from the hive was better than that offered in sections in the stores. I replied that comb honey that has aged a month or so often has a milder flavor than that freshly capped.

I run across skeptics of his breed continually. They are hurting our business. They are going to continue to do so. I don't see how we can hope to clear up the question definitely and universally in the thoughts of the honey consuming public in anything like a reasonable period of time. It's the bee master's burden. It helps the small beekeeper and hurts the big one.

While on the subject of honey sales I might make a few comments on labels. I recently visited a number of grocery stores just to see what kind of packages they offered in our line. I found most of the labels dull, lifeless things with no shelf appeal—nothing to catch the customer's eye. Some of them were either vage or deliberately misleading such as "light amber," "fireweed blend." My aunt, who uses virtually no sugar in her home, said she had tried some of this "fireweed blend" and that it did not resemble fireweed honey at all. There is one store in Portland that goes in for high class honey trade. There you can buy almost any kind of honey you want. If you pay for orange blossom that's what you get. They ask and obtain a premium for this honey and all their other unblended honeys. They charge sixty-five cents for five pounds when the market is fifty-five cents.

There is a "foreigner" in our midst though. He is Bradshaw of Idaho. His package is the only one I saw on my visits that has a real knockout of a label. It stands right out and stares you in the face until you grab a can in self-defense. I have never tried this honey. I have enough of my own. But friends who have eaten it say it is one of the best they have ever tasted. Apparently the quality is uniform too. If the Oregon producers don't like this invasion, and I confess I didn't myself at first, let them put out a standard high quality product with a label that will take your eye as quick as anything that ever came out of Hollywood. Until then Mr. Bradshaw is going to sell honey in Oregon.

ABJ

Honey Removal With Carbolic Acid

JAMES THOMPSON, writing in the California Cultivator for September 25, 1937, discusses at some length the use of carbolic acid for the removal of honey, calling it a real economy of time and labor and giving as a record that of an Orange County beekeeper who, with one assistant, removed, loaded and drove to the highway with 140 ten-frame supers in two hours from the start. It is admitted that it was done to see just how fast the work could be accomplished. He also tells of a San Diego County producer, who with two men, removed an average of 436 supers of

honey per eight-hour working day throughout the season.

Well, that is pretty good work isn't it? There are probably many producers now familiar with this method who could tell of an equal volume and speed in honey removal by the use of carbolic acid. In our own work, to remove 150 supers in two or three hours' time is not unusual.

It is much preferable, however, when the honey is being removed to examine the brood nest before the honey is loaded to see that no colonies have disease. If this is done and if the brood nests are also examined before supers are given at the beginning of the honeyflow, the removal of any colonies that may have foulbrood greatly reduces chance of the spread of disease. The supers found on the diseased colonies at crop removal may then be put by themselves and handled separately, the combs to be rendered up and the supers to be cleaned for another season when they will be furnished with frames and new foundation, and not remain scattered through the extracting supers in storage and so gradually infect all the supers in use. This is probably one of the most frequent causes of the spread of disease where extracted honey is being produced.

When examinations are thus made at the time of removal, of course the work is much slower. Even at that, however, it is possible to remove 150 to 200 supers in an eight-hour day if the distance to the yard is not too great and the bees not yet given to robbing.

The use of carbolic acid has become so general and has been so successful, that it is surprising to learn that a few reports are given of honey being tainted from contact with the acid. This must surely result from a lack of understanding of how to use it. Full strength carbolic acid sprinkled on the cloth on the other side of a cover board will not leave a taint even in open cells. However, should the acid drip off the board from a too heavy application or reach the honey in some way, it will be absorbed by the honey in open cells and it would take little to bring a taint to considerable honey. It is quite likely that the few reports which have been received from beekeepers who have found their honey to be tainted, can be explained in this way.

—ABJ—

Fair Enough!

By C. M. Litteljohn,

Washington.

CYNOSURE of many eyes at the fair in western Washington each autumn are the honey displays of amazing diversity and numerous articles of food created from the gift of the bees. These presage, moreover, countless additional uses for honey in home or menu of eating places, as the fair gains in abundance and scope.

With an eye to the spectacular, honey displaymen in charge of this important segment of the Western Washington Fair have adopted certain standards, each year rigidly adhered to, which provide a perfect build-up for eye appeal and appetite, and help to create new honey-consciousness on the part of fair goers (and aren't we all?).

The show in Puyallup, Washington, moreover, which takes in honey production from a wide western Washington area, a section where prized fireweed honey is a torch that lights the way to many tables, exemplifies the extra-curricular uses of honey, especially that premium quality, or richly flavored product of bees that flit through fireweed as they blaze new trails over stumpage and burned-over logged land beautified by the hand of nature through tapering flowers that give a gorgeous glow to a landscape that is part and parcel "of the bees" wild pasturage.

Have you ever seen such a fair—highlighting honey in such interesting ways? Surely, the honey section itself is fair enough for any one. Appearance of the light and dark amber products of clear lucidity and originality of display score highest when awards are handed out by expert judges or connoisseurs of excellent honey that never fails to make the grade.

The candies that are perfect honeys of sweets, breads and biscuits and other goodies owing to their sweetness to honey—"for goodness' sake"—present in fine relief a striking contrast to the jars and bottles of the fancy honey on parade. Honey becomes in modern parlance the hit parade of the Puyallup show—the very sweetest part of the fair.

Bigger 'n better honey displays and awards for prowess around Puyallup fire the fireweed honeymen with enthusiasm. The honey producers are in clover, no less, like their bees, while patrons admire their prize-winning products.

So it's a fall fiesta par excellence, this exhibition that is fair enough. Year by year attendance grows in the perennial parade.

A Heavy Northern Honeyflow

Geo. H. Taylor, in a western paper under "Chats With Beekeepers," tells of a heavy honeyflow at Brooks, Alberta, situated in one of the irrigated districts.

"During the week of August 10-17 the bees piled up an amount of honey equal to one-third of the entire season's crop. A test hive placed on a scale for observation purposes throughout the season, showed a gain of 16 pounds of honey in one day and a total of 70 pounds for the week. Despite adverse weather conditions and high winds until well into July the industrious little workers managed to harvest an average well over the 200 pound mark, turning a poor start into quite a profitable season's crop. The bees did quite a rushing business during the extremely hot weather on the alfalfa blossoms, then took a vacation on to the sweet clover fields when a fall in the temperature increased its nectar secretion to a remarkable extent."

The long warm days of full sunlight and the cool nights in the north with the concentration of a good white honey producing plant like sweet clover, is a team-up hard to beat.

—ABJ—

Familiar Bees

This is a picture of a young man who helps us with the bees. It shows what happens when you try to take off honey in cool weather.

Mrs. Joe Vickaryous,
Saskatchewan.

[Yes, indeed, not only in cool weather, but late in the day. Sometimes also when bees are lost and don't know where else to go.—Ed.]

How I Use Food Chambers Both Shallow and Deep

After reading the article by E. L. Sechrist, of Tahiti, on page 323, July issue, of this journal on "How to Use Shallow Food Chamber with the Clear Brood Nest," I then read it the second time as I have been using the food chamber for years, almost ever since I have been trying to keep bees. Having used more shallow than deep supers, I am not sure that I like the deep any better than the shallow, provided that the shallow one is full of honey and sealed to the bottom bar with enough honey in the brood chamber to last the bees until they begin to rear brood in the spring. Then they will begin the brood nest in the regular brood chamber, but, if for any reason the colony becomes weak and there is room in the shallow food chamber for them to start brood rearing, they will leave the bottom altogether and I have had them swarm before they would go back to the brood chamber below. But this is never the case if the colony is kept in proper condition.

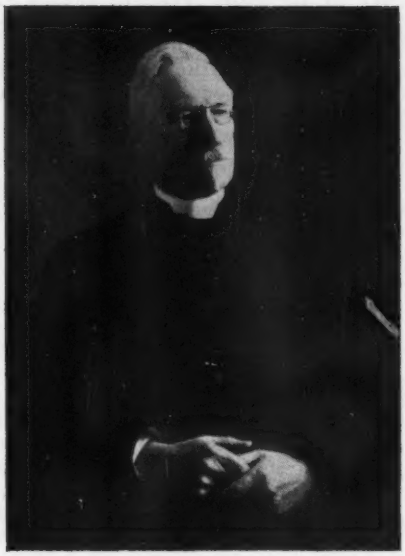
I like the shallow one because the rim of honey can be completely removed in the spring without taking away so much of the brood.

I will say at this time that I produce both comb and extracted honey. Now, I select the strongest colonies to be used for comb honey supers, then I select one third as many that are not as strong to take care of the food chambers through the honeyflow and fill them good and full to be placed back on the comb honey colonies when the crop is removed.

In extracted honey production the use of the food chamber varies greatly. It is sometimes at the top of the stack especially if a deep one, and if a shallow one, it may be left directly on the brood chamber with other supers placed above. I especially like this plan for one thing. It is so easy to tell when the colonies are building queen cells. All there is to do is to take a peep between the food chamber and brood chamber. If there are any cells started, they are most likely to be along the bottom edge of the food chamber. One of the main things to watch in this plan is to see that the queen is crowded out of the food chamber and it is filled and capped over to the bottom bars.

When it comes to selecting the best plan to use, it is guess work with me unless I know what the season is going to be. Here in this section the seasons and honeyflows are different almost every year. Therefore, it is almost impossible to work out a system that will give uniform results every year.

Geo. H. Williams,
North Carolina.



The Code of a Scots Honey Judge

By John Beveridge,
Scotland.

John Beveridge, president of the Scottish Beekeepers' Association, is an ardent member of the "clan apis," a real judge of honey. Our own judges can learn much from what he says here.

THE examination Scottish honey judges have to undergo is a very stiff one and both the theoretical and practical parts have to be completed in one hour. As even the largest shows in Scotland, with as many as 500 entries, have to be judged in three hours, at the most, the judge must be expert and quick. For instance, if there are sixty entries in a light honey class, the steward loosens the caps of all the jars. The judge passes along the bench rapidly testing each exhibit for colour, density and aroma. The inferior jars are pushed back and the superior brought forward; and usually only ten or twelve are left in the front row. On the way back to No. 1 these superior samples are tested and reduced to about six. Then each of the six is tested carefully for flavour and the other points. In this way the palate of the judge is kept fresh for tasting only six or so of the 60 entries. If there are two judges, A would judge Class 1 and B would judge Class 2. When A tests the last six in Class 2, B similarly arranges those in Class 1 in the order of merit. Differences of opinion are discussed and adjusted, and so the prizes are expeditiously settled.

In the section honey classes the judge expects all the entries to be easily opened for inspection. If some of them are so sealed up that they cannot be at once examined, he concludes that the exhibitor has something to conceal—popholes in the corners, or the section wood soiled or not cleaned. He probably deducts some marks for the extra trouble involved. In a class of sixty entries what labour would be involved if each section had to be cut open! One section in each entry should be opened unless they are all sealed up. In that case it saves time to treat them all as equally bad or good inside, and they are judged from outward appearance only. The judge notes the section with neatest, whitest, smoothest wax and cappings, provided that when he takes the section out of its case he sees that the foundation is fixed all around with no popholes; and he favours the section in which there is no honey in the row of cells next the wood. This allows the beautiful section to be cut out close to the wood without any honey running onto the plate. In testing the honey for flavour, he puts the taster into a sealed cell and not into an unsealed one.

The class for heather honey in jars in Scotland is usually an interesting one. Pure heather honey does not granulate unless 10 per cent of pollen grains of other plants is present (But 5 per cent of charlock might start granulation). Pure heather honey is of a jelly consistency with a multitude of tiny air bubbles which give a characteristic sparkle. If the honey is heated these bubbles rise to the surface and their absence at once reduces the merit of the exhibit. In common parlance, pure heather honey does not imply absolute purity. If there is 20 per cent of other pollen present, it would still be reckoned good heather honey; and even if it had upwards of 40 per cent of foreign pollen grains, that honey might, by flavour, aroma and consistency, pass anywhere as good heather honey.

Bell heather (erica) does granulate, and it is to be classed with other dark honeys; for it has not the characteristic colour, sparkle, consistency, astringency, flavour, and pollen of the genuine (ling) heather honey.

A Method of Sun-Bleaching Beeswax

By Geo. H. Vansell,
Associate Apiculturist, U. S. Department of Agriculture,
Bureau of Entomology and Plant Quarantine,

and C. S. Bisson,
in charge Division of Chemistry, California Agricultural
Experiment Station, Davis, California.

BLEACHING of shredded wax in the presence of moisture by exposure to the sun is a very old practice. A modification of the sun method, by causing the wax to remain liquid throughout the bleaching tests, has given encouraging results. Such bleached wax does not become snow white, but all traces of the characteristic yellow contaminating color disappeared from the majority of the samples.

In this experiment, keeping of the wax in a liquid state was accomplished by means of a suitable rack constructed over a hot spring (182° F.) at Wabuska, Nevada. The depth of the wax in the aluminum pans used was ½ inch. Time required for bleaching is indicated, with other data, in table 1.

Samples containing appreciable quantities of propolis did not respond well to this method. Irrespective of bleaching, all waxes except those badly propolized became very clear and transparent during treatment.

There is a decided difference in the time exposure necessary to reach a standard degree of whiteness. This fact is in accord with an established trade preferential enjoyed by waxes from certain foreign points of origin, because of their ready response to treatment. Until the exact natures of the numerous yellow shades in commercial waxes are established, we must continue to bleach wax by the present rule-of-thumb methods.

TABLE 1.—SUMMARY OF WAX EXPOSURES TO SUNLIGHT AT WABUSKA, NEVADA.

Wax No.	Color of crude wax	Hours Sun	Color after exposure	Predominating plant source
12	Near white	9		Algaroba
39	Yellow	18		Lima bean
46	Creamy	18		Orange
33	Pale yellow	20		Eucalyptus
4	Yellow	20.5		Alfalfa
41	Yellow	20.5		Alfalfa-sweet clover
42	Pale yellow	21		Incense cedar honeydew
44	Dingy yellow	21		Star thistle
5	Dingy yellow	21		Star thistle
1	Yellow	25.5		Fireweed
17	Dingy yellow	25.5		Chamaebatia
43	Bright yellow	26		Alfalfa-sweet clover
16	Dingy yellow	26		Creeping sage
9	Yellow	26		Alfalfa
15	Dingy yellow	35	White	Manzanita
3	Yellow	35		
27	Dingy yellow	35		Orange
45	Bright yellow	35.5		Salal-fireweed
18	Dingy yellow	35.5		Incense cedar honeydew
37	Dingy yellow			Star thistle
2–1	Pale dingy yellow			
2–3	Yellow			
7	Brown			
47	Dingy yellowish brown			Desert buckwheat
14	Dingy yellow			
28	Dingy yellow			Alfalfa-sweet clover
31	Dingy yellow			Cotton
36	Dingy yellow			Star thistle
38	Brown			General mixture
10	Bright yellow		Pale brown	Fireweed-blackberry
11	Yellow		Pale yellow	Orange
13	Black	42.5	Pale brown	Miscellaneous
2–4	Brownish yellow		Pale brown	
19	Yellow		Pale yellow	Sweet clover-alfalfa
22	Smoky yellow		Pale yellow	
2–5	Near blackish-yellow		Pale brown	
29	Black		Brown	Alfalfa-sweet clover
6	Smoky yellowish		Yellow cream	Alfalfa-sweet clover
34–1	Brown or gray		Dingy gray	
34–2	Near black		Brown	
34–3	Dirty yellow		Brownish cream	
34–5	Bright yellow		Pale cream	
8	Smoky yellowish		Yellow cream	
48	Yellowish red		Yellowish brown	
2–2	Brilliant yellow		Quite yellow	

Heather Honey

I wish to protest against the statement made by Mr. Mavie in your September number, page 430, that true heather (Calluna) honey is not produced outside the British Isles, and that the heather of northern Europe is Erica and is devoid of the characteristic properties of true heather honey from **Calluna vulgaris.**

Calluna vulgaris grows over a great area of north Europe, also in northwestern France and in Bavaria. Where it grows, its characters are those associated with heather honey in Britain.

It is possible to extract Calluna honey without destroying the combs. It is a common practice in Germany where a loosening appliance is used. Old-fashioned beekeepers, however, use wooden home made presses like those used in straw hive days. It is simply a difference in preference. Both methods have their advantages and disadvantages. We prefer to press rather than to take the trouble to put our combs through an expensive loosener. There is one such machine in Britain—at the Craibstone Apiary, Aberdeen, under the care of Dr. John Anderson, editor of the "Scottish Beekeeper."

Annie D. Betts, Editor,
Bee World,
England.

—ABJ—

Bees As a Thermostat

A colony of bees in a beehive must regulate the warmth in the hive in winter by getting closer together when the air is cold and by spreading out when the temperature is warmer. They act like a thermostat, either clustering tightly to conserve the heat or lossening up and spreading out to release it. That is why the temperature within the cluster itself changes little in comparison with the temperature changes outdoors.

In wintering in a cellar, we have found that the regulation of the temperature on the part of the bees is remarkable. When the thermometer outside registered zero, the temperature in the bee room was 36 above. When the outside temperature was 62 the temperature in the cellar was 58.

Give the bees a chance to exercise this instinct without meeting excessive conditions as they will take care of themselves in winter.

[This coincides with the latest experiments in wintering. The purpose of protection, therefore, is to avoid excessive conditions. The bees do the rest.—Ed.] J. F. Diemer,
Missouri.

Carbon Dioxide—the Odor Fallacy

Just a word about carbon dioxide gas, the properties of which seem to be in dispute in recent articles on smokers and smoker fuels.

Carbon dioxide is a colorless and odorless gas, at least according to all the chemistry books and encyclopedias I have been able to locate. The odor of the smoke is caused by various other gasses including the extensive field of hydro-carbon.

The odor, or should I say the lack of it, can be easily ascertained by a simple test anyone can make. Try to detect an odor of carbon dioxide in the next soda you purchase at the corner fountain. If you are still unconvinced, try a glass of plain water that has been "charged." That gas used in your soda was carbon dioxide. I warrant that you will detect no "pungent" odor of the gas.

Roger Burgess,
Idaho.

———ABJ———

To Make Paint Stick to Galvanized Covers

A simple method to keep paint from peeling on galvanized metal covers is to rub the metal with a cloth saturated in vinegar, when it dries, rub off the white sediment and the metal is ready for painting.

Frank Johnson,
Wisconsin.

———ABJ———

Another Horse Gone

We lost one of our horses from bee stings. My son was digging potatoes in a field ten rods from the apiary and the bees were working hard on a late flow of goldenrod. One bee stung a horse and in a few seconds there were a great number of others to join it.

As soon as the team was unhitched from the potato digger, the horses ran towards the barn fifteen rods away. Before reaching the barn one horse dropped dead from stings. The other one lived, although her head and neck were badly swollen. We think it was somewhat immune as she had been stung at different times before.

I heard of one team killed because of stings when they knocked over a beehive, but I couldn't believe it could happen this way.

Mrs. Amelia Seering,
Indiana.

———ABJ———

Wax for Nail Holes

When filling nail holes in yellow pine, use beeswax instead of putty, as it matches the color well.

Frank Johnson,
Wisconsin.

Flighty Attends Another Meeting

Mr. Flighty, himself.

JULY 31st went down in my diary as a memorable day. I never attended a beekeepers' meeting where, in spite of the more than usual delay, I enjoyed myself more.

Mrs. Flighty and I delayed our arrival at Jim Hilbert's (as it appeared several others did) in hopes that the meeting might possibly get under way before our arrival. But confusion reigned, and the next thing we knew, all the cars were lining up on the main highway headed for town. I finally coaxed Mrs. Flighty into the line-up under protest.

"What is the idea?" she demanded. "The program says we are to go to Bingham Park and that is in the other direction. And besides that is where the Ladies Aid is to serve that chicken dinner you have been raving about. I'm for staying right here in Hilbert's dooryard."

"Not me," I said, "I heard Ralph Blackman say they were going to The Hut, maybe that is over in one of Jim's other yards."

Much to our irritation the motorcade retraced our course back into Traverse City and on to the north side of town to the Hut, one of those famous little stands that serve delicious cherry pie. We were not to tarry here for the crowd moved back a block to a large park, but I knew we were with the right crowd even if Mrs. Flighty did mistake the road sign on M22, reading **winding road**, for **wrong road**. Did you?

The roar of the water on the beach, the noisy steam exhaust from the cherry packing plants made it impossible to hear anything but a shout from your neighbor. But we knew something would be done when we saw Hilbert and Kelty racing across the park in hot pursuit of something. But I was for giving up and heading home; not so, Mrs. Flighty.

"There is a gentleman here from India, a swell looking fellow, I'm going to see more of him." Of course I'm the boss in our family—so we stayed.

With the afternoon half gone, we got under way at the American Legion Hall. Genial Jim Hilbert opened the meeting and turned it over to Professor Kelty, who then called on our new state inspector, V. E. Mock, who gave us a very interesting picture of what his department was accomplishing this year. We were informed that the legislature granted the largest appropriation yet for bee inspection, $25,000. How much does your state give?

Clif Muth, who now has a summer home at nearby Northport, then gave us his Padded Stepping Stones. You are a good lecturer, Clif, may I add, a dramatist also? Welcome, Buckeye - Michigander. Muth gave us a very interesting discourse on honey prices and margins.

Professor Sardar Singh, of the Punjab College of Agriculture, India, lightened the program with his description of Indian geography. It was surprising the range of English vocabulary at his command. One had only to shut his eyes to see India, so well did he picture it. Honey is eaten in India not so much as a food, but as a preventive medicine. Singh's statement that their giant bees were migratory set Kelty's constructive mind working. Why couldn't Ralph Blackman, of Portland, who keeps many bees in this section, stock up on this type to solve his transportation problem. Russ suggested that perhaps the bees could even be trained to take the honey right to the market. What a thought.

A real treat was the speech by that grand old man of beekeeping, E. R. Root. Root paid high tribute to our northern Michigan climate and scenery, and discussed the fallacies of manipulation that prevailed at the time he became active in beekeeping. Ernest Root is an old man, but far from dead. He is right up there on the firing line doing all in his power for his love—the honey business.

Mrs. M. F. Jensen, the queen bee of the Institute, gave another of her ever delightful talks, telling of her ten years with the American Honey Institute, the work of the auxiliaries, and the demand plus the scarcity of comb honey. The demand is great.

Miss Willah Goodman, financial secretary, explained her work and showed us the Institute's empty

purse. Willah illustrated the stampede for the exit that usually occurs with the call for funds, with a story on A. G. Woodman. It seems that as a small lad on the farm, Bert liked the threshing season, but when the crew arrived at their farm, he was always found hiding under the bed when the whistle blew.

"Am I right?" Kelty put on a financial appeal that would put any preacher to shame, and gave us a very vivid picture of the strike situation and the unfavorable effect it had on the honey market, as only Kelty can tell it.

The eats? Oh, they weren't forgotten. Back at the Cherry Hut we were served a delicious lake-trout supper, with all the trimmings, which included two items that made Traverse City famous—cherry pie and Hilbert's cut-comb honey. A delightful old country setting, everyone seated at small tables beneath huge colored umbrellas and the air filled with melodic strains from Hilbert's Cherryland band.

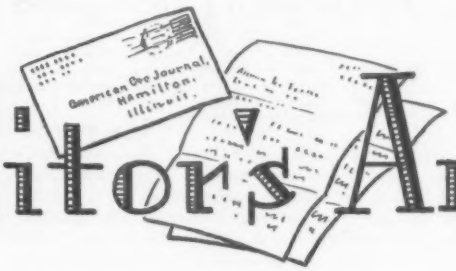
The day was climaxed by a delegation from the Wayne County auxiliary that cornered me when I was leaving and demanded if I were Flighty.

* * *

Mrs. Blakely, don't you tell,
If you do, I know I'll yell.

* * *

There, I was going to tell you about my new sales invention, it's a wow, but my time is up and it will have to wait. A crowd of customers await me—result of the invention.



The Editor's Answers

Honey Plant

I send you a sample of a honey plant. Will you tell me the name of it?

Answer.—by Frank C. Pellett.

It is one of the centaur flowers of which there are many different species. This one is **Centaurea dealbata**, a perennial from Persia. It is closely related to the bachelor's button or cornflower commonly cultivated in gardens. It is attractive to the bees and apparently a good honey plant.

———ABJ———

Sterilizing the Extractor

In a recent issue you say that Zonite will disinfect extractor. What strength? Would not Clorox or some other cheaper variety of chlorine do? Zonite is a medical grade and more expensive. Will this solution rust the iron? I use chloride of mercury tablets in water to wash hive bodies after scorching and this might be cheaper.

SOUTH DAKOTA.

Answer.—The c eaper solutions are all right. Even good hot soapy water is usually enough. The chlorine will not rust the metal if the machine is thoroughly washed out with hot water afterwards. Chloride of mercury tablets strong enough for the purpose will be satisfactory.

———ABJ———

Septicaemia

Last January I had a colony dying from an unknown cause, the symptoms resembling paralysis. I was advised against killing them and a specimen sent to the government laboratory showed no disease. I fed the colony sugar syrup as you suggested and the death decreased, though a few bees continued to die each day. I requeened about two weeks ago as you also advised and the queen was accepted, but I found her today lying near the hive dead with no sign of injury. Supersedure, I suppose. Yesterday, there was a sudden return of the disease with bees dying by the hundred. Five other colonies are also slightly affected. The dying bees crawl about near the hive and attempt entering, but are repelled by the guards. Few are inside especially on top, but they are constantly dragged out.

The bees have a swollen, smooth abdomen, perfectly black at the tip, and darker yellow usually towards the center. The bands are almost invisible, the thorax is quite black and the wings are slightly lifted and held stiffly at a 45 degree angle to the body. The division between the abdomen and thorax is more plainly evident than usual, giving them a wasp-like appearance.

NORTH CAROLINA.

Answer.—Dr. Burnside at the Federal Bee Culture office at Beltsville, Maryland can give you more help than we are able to do. Our experience indicates that colonies so infected must be moved away from the spot occupied because apparently the infection not only invades the entire hive, but the ground on which the bees die. I have found that a new hive placed on this old spot will also show the same trouble.

So try moving the colony to a new place, and spade up the ground at the old spot before putting any bees there again. The colony removed should be given brood and emerging bees from colonies which do not show signs of the trouble. A new queen will help.

———ABJ———

A Gynandromorph

In one of my mating nuclei I have what appears to be a bee, half worker, half drone. Its head is like a drone, its tongue like a drone. I believe the legs are without pollen baskets. Have you ever heard of a bee like this one before?

TENNESSEE

Answer by Dr. Lloyd R. Watson, Alfred University, New York.

This bee is clearly a gynandromorph, and its only importances lies in the fact that in its development one part of the body developed to be a male and the other part of the body developed to be a female. Such cases have often been observed in other living forms, especially in the banana fly. Only a few, I believe, have even been reported among bees. It is a curious coincidence that just a day or two before I received this bee from Mr. Cale, Mr. E. J. McNay, who is working with me this summer, picked up just such an oddity on one of our hives, and he also reports that last spring in an apiary in Mississippi he found a bee which was half queen and half drone, the head end being female. It may interest you to know that I have never heard of a gynandromorph in which the head end was male and the rear end female. In the banana fly world an oddity has been reported in which one side of the fly was male and the opposite female.

I am pleased that you were sharp sighted enough to notice this oddity among your bees, and I trust that you are always having an eye out for new and unusual forms. In case you ever see any more oddities among your bees of any kind, I trust that you will write me at once about it, because of the possible genetic importance that such unusual forms might have in our scientific study of heridity.

———ABJ———

About the Modified Dadant Hive

How do you get the bees to work in comb honey supers? How many supers do you use per hive? Are new supers put next to the brood chamber? How far apart should rows of hives be placed?

ILLINOIS.

Answer.—Supers are put on the hives before the bees store honey in the brood combs. When fresh nectar appears in the brood combs, it is time to put on supers, just before the main honeyflow. Four to six comb supers should be on hand for each hive. The plan of putting new supers under the ones already occupied should be followed as with other hives.

We like to keep the rows of hives about 10 feet apart. If rows must be placed closer together, place the hives back to back with a wide separation between the pairs of rows.

———ABJ———

The Tachinid Fly

In "All Around the Bee Yard", page 450, you refer to black flies that are parasites on the army worm. We had army worms in the Red River Valley this year and a lot of these flies. Also the honeyflow was not what it should have been. How can the flies be parasites on the army worm and how do they affect the honeyflow?

MINNESOTA.

Answer.—The black fly or tachinid fly is actually a parasite on the army worm. The larvae depend on the army worm larvae for their food. The eggs of the fly are laid on foliage where the worm may contact them. As soon as the eggs hatch, the larvae tunnels through the skin of the army worm caterpillars and kill them. So, in a year when there are many army worms, there are also many flies. When there are few worms, there are few flies.

The adult flies are nectar feeders and live on the flowers staying there all the time so the bees do not get a chance. They soon die however.

Observation Hives

Can you tell me how to establish observation hives in my store for the purposes of honey display and selling?
WEST VIRGINIA.

Answer by Jas. I. Hambleton, Division of Bee Culture, Washington, D. C.

Observation hives in stores or other public buildings can be maintained with comparatively little trouble if certain fundamental principles are followed. The tube through which the bees find exit to the outside of the building should be as short as possible, although we have used glass passageways approximately 2 in. x 6 in. in cross sections and 12 feet to 14 feet long. If possible, the tube should be large enough to allow the free passage of air from the outside into the hive. During a honeyflow a tube of the dimensions indicated may be too small for a strong colony, in which event the ventilation should be augmented by running an air current through part of the passageway by using a small electric fan.

A colony will work more normally if the sides of the hive are double-walled glass with an air space between. Provision should also be made to feed such a colony sugar syrup in the event the bees cannot maintain themselves upon what they can gather on the outside. A wood and wire excluder under the whole hive should be provided to prevent the colony from absconding. Ordinarily the exit tube does not give sufficient ventialtion so that additional places at the side or back of the bottom-boards or in the hive body itself should be provided to give extra ventilation when needed.

—ABJ—

Uniting for Winter

What is the proper way to unite hives for winter? Some of mine are weak and some some strong. ALABAMA.

Answer.—To double hives for winter, place one above the other with one thickness of newspaper between them with strong colony underneath. Make sure that several small tears are made in the newspaper so the bees will gradually go up and so in this way, unite.

—ABJ—

Bees Replacing Their Queen

Should a colony be killed or lost accidentally, and the bees start to rear a new queen, will the colony swarm when the virgin emerges if there is more than one queen cell? Or will the first virgin emerge and kill the others in their cells?
NEW YORK.

Answer.—When a queen is accidentally killed or lost and the bees rear a new queen, there is always some danger of a swarm when the first virgin emerges. More often, however, the colony will not swarm under these circumstances, and the first virgin out will kill the others. The bulk of swarming comes when the colonies are crowded and the old queen leaves with the older bees. Sometimes, however, when the queen is too old, the bees will kill her and start a number of queen cells and swarm with the first virgin.

—ABJ—

By G. H. Cale

MANY bookeepers have been moving bees without screening or closing. This is risky business over long distances, but often valuable for short moves in cool weather. Even in warm weather with short moves, it works, but after arrival at destination, it is sometimes hard to unload the bees because they come out of the hives and crawl up the sides and fronts and around the bed of the truck so that it is very unpleasant unloading them in the dark.

However, we have found if we move them short distances in the cool weather of fall or spring and the loading is done at night or near sundown, moving to destination without closing or screening, it is fine. The bees are left on the truck until the cool of early morning when they unload very well without any trouble.

—o—

Too many breeders ship bees in cages in which candy is hard and granulated. Such cages when handled in numbers in requeening result in loss of bees and queens. The candy should be soft so the bees can use it as they wish.

Also many cages are two crowded with attendants. A half dozen attendants are enough. The item of loss from these two factors is great enough to cause one to choose breeders who send reasonably supplied attendants during shipment.

While we are on this subject of queens, why is it that we come to like queens from certain breeders because they are good queens, then after a period of time, the same breeder begins furnishing queens that are not so good; finally, queens that in comparison are quite poor. Is it hard to hold the breeding stock? Does the breeder become careless? Perhaps some breeder, reading this, will try to answer it. But it is true.

—o—

Louisiana suggests a resolution to be submitted at the Washington conference to impower the Federal Government to coordinate the existing state laws and regulations on bees to control the inter-state movement of bees on combs.

Now what? What will the comb package shippers of the south say to this? What will the migratory beekeepers of the west say? They find it impossible to make a living from bees in one place. That is also becoming true of middle western beekeepers and we note that a number of beekeepers from the northeastern states are going to the south.

After we get all the walls built and all the exclusion clauses working, perhaps we will go back to the garden days of beekeeping once more and grow chin whiskers.

—o—

Stuart Hart writing in the Canadian Bee Journal of September on the fall management of bees says: I have definitely decided that requeening each colony every year pays."

How do you get that way? If you raise and test your own queens or if you buy and test queens, it may be so. But if you substitute for any hundred queens now in the hives, one hundred unknown queens, have you improved yourself? On the other hand if you requeen colonies that have poor queens only, there is the chance that you have improved yourself.

Better practice, not annual requeening, but requeening the colonies having poor queens, when the poor queens are found or at the first opportunity. In other words, requeening with us is constant and not annual.

—o—

Mr. Hart also suggests a new idea. He says, "After fall brood rearing is reduced to a small amount—take a super of honey, place it on the bottom board, put a queen excluder on top and the brood chamber on top of the excluder. The bees will move the honey from the bottom to the brood chamber, and when the brood chamber is heavy enough, the super underneath may be removed." This might work. Never thought of it. We surely hate to feed sugar syrup and with our big hives the leaving of a shallow food chamber does not suit us. Nevertheless, we may have to do it in some of our locations. Either that, or try Mr. Hart's scheme.

—o—

Walter H. Hull in "Gleanings" lead article, September, comments on opportunities in beekeeping. He says "Producing and selling honey are two separate fields." I'll say they are. Absolutely two separate fields. It is rare to find a good producer and a good salesman in the same individual. That is why it would be healthy if there were packers enough who understand their business and who would pay us decent prices, to distribute all our honey.

Many beekeepers eventually become packers and distributors. Few, if any, become beekeepers. When beekeeping experience precedes the distribution and selling of honey, we have a valuable combination.

New Plans for Institute Financing

According to a new plan recently developed, the American Honey Institute is to receive 3 cents a case for extracted honey and the buyer is expected also to give a similar amount sending the remittance to the Institute and informing the customer of the deduction, with, of course, the opportunity not to participate if it is so desired. Most beekeepers will be willing to endorse this plan. It should bring in a considerable amount of money. It is hoped that the usual donors, will continue to make such contributions as they are able to do. Those who have already subscribed to an annual payment should continue such payments.

Beekeepers familiar with this plan should make certain that those who buy the honey from them are acquainted with it, or that they themselves send this much to the Institute for each case of honey sold, 3 cents a case from the beekeeper, and, if possible, 3 cents a case from the buyer. Most honey buyers have agreed to the plan and also have agreed to inform the beekeepers from whom they buy, so collections will be automatic on the part of the packer or buyer and will be taken care of in that way.

—ABJ—

Five Men Get Year Each for Honey Theft

Judge G. W. Brown of Shenandoah, in a special term of the district court here late Friday sentenced Elbert Kelly, Clyde Bird, Harry Clark, Gabe Eberhart and George Clark, all of Hastings, Iowa to one year each in the county jail for stealing honey.

From the hives of Dick Ferrington, south of Henderson, Iowa, they stole all the supers, consisting of about 300 pounds of honey, Sheriff DeMoss charged. (From clipping sent by Elva Kirlin.)

—ABJ—

Wyoming and Utah Crop.

The Utah honey crop will be a little more than one-half of normal according to a Department of Agriculture survey. In Wyoming, the bees have been fed for winter stores. In southern Wyoming the crop is reported 10 to 60 per cent normal, while in the northern section it is less than half of a year ago.

Glen Perrins, Utah.

—o—

Annual Ontario Meeting, Nov. 23-25

The annual meeting of the Ontario Beekeepers Association will be held in the Blue Reception Room, King Edward Hotel, Toronto, on November 23, 24, and 25.

An interesting program has been planned for the three days and beekeepers on both sides of the boundary are invited to attend.

E. J. Dyce, Secretary

—o—

Iowa Meeting and Short Course November, 18-19.

The annual meeting of the Iowa Beekeepers Association will be held at Ames, on November 18 and 19, in conjunction with the annual short course for beekeepers.

These meetings are held with similar meetings of other affiliated organizations of the state Horticultural Society.

Information concerning the short course may be had from F. B. Paddock, Extension Apiarist, Iowa State College of Agriculture, Ames.

—o—

Illinois Convention, November 9-10.

The Illinois State Annual Beekeepers Association convention will be held November 9 and 10 at St. Nicholas Hotel, Springfield, Illinois. The banquet will take place on the evening of the 9th. A Constitutional Amendment defining the status of the Illinois Honey Foundation will come up for consideration. BE THERE Edwin F. Peterson, Secretary. —o—

Conference On Bee-Breeding

A conference devoted to beebreeding, the first of its kind in the New World, was held in Washington, D. C., on July 14-15, by the United States Department of Agriculture. It marked the first occasion in this country when both trained beekeepers and geneticists have met together to discuss various phases of bee-breeding. Those attending the meeting were: Dr. L. M. Bertholf, Western Maryland College; Dr. L. J. Cole, and Harry H. Laidlaw, Jr., University of Wisconsin; E. J. McNay, Kansas State College; Dr. F. B. Meacham, North Carolina State College; Dr. L. R. Watson, Guggenheim Fellow, Alfred University; Dr. P. W. Whiting, University of Pennsylvania; and Dr. W. V. Lambert, Bureau of Animal Industry, U. S. Department of Agriculture. Besides Mr. J. I. Hambleton, others present from the Division of Bee Culture were Dr. C. E. Burnside, Dr. Otto Mackensen, and W. J. Nolan. Mr. Lee A. Strong, Chief of the Bureau, gave a brief welcome on the opening day, while Mr. A. S. Hoyt and Mr. S. A. Rohwer, Assistant Chief, spent a short time with the conferees on the succeeding day. Mr. Nolan presided at all sessions of the conference.

During the conference the general setting of the bee-breeding problem was set forth not only from the standpoint of what has already been accomplished with the bee itself but also with other hymenopterous forms. The subject of matings, both natural and artificial, was reviewed, as well as what chracters could best be utilized in breeding. The discussion of characters included those already available and also the possibility of using induced mutations. Other topics covered were rearing and maintaining stock; procuring and using samples; making measurements and records; and the roles that the Department of Agriculture, other institutions, and various individuals can play in working together on a general bee-breeding program.

Professor Cole contributed much of value to the discussion because of his long experience with the problem of improving various kinds of farm animals by selective breeding. A resume by Doctor Whiting of what has been accomplished by himself and associate with the hymenopterous form **Habrobracon juglandis,** a parasitic wasp, was of great interest.

The following is a summary of important points emphasized in the conference:

1. Fundamental work on the genetics of the honeybee should be given equal priority with those phases of breeding having to do with race improvement through the selection and inbreeding or crossing of existing strains and races of the honeybee on the basis of some colony character such as honey production. This fundamental work can most easily be conducted through the use of some readily recognized mutant character expressed in the individual bee, a mutant eye color being one example.

2. A more detailed study is needed on the process of reproduction in the honeybee, especially as regards the reactions of both queen and drone in mating under natural conditions.

3. An up-to-date summary and interpretation of cytological literature dealing with the honeybee is needed.

4. A new cytological study by a

Mrs. Jensen of American Honey Institute and two Home Economics demonstrators for the Alabama Power Company.

cytologist experienced in technique with Hymenoptera and in the use of the latest cytological methods is essential.

5. An attack should be pushed on the problem of improving the techique of both the Watson and Laidlaw methods so that a higher degree of certainty will accompany work with these methods both as regards percentage of queens from which worker progeny can be obtained and as regards percentage of success in filling the spermathecae of individual queens with sperm.

6. Artificial insemination can now be used to maintain a reserve reservoir of choice stock and to make crosses in genetic studies involving characters affecting only the individual bee. Natural matings must still be resorted to in breeding for colony characters because mass production of progeny per queen is needed in these cases.

7. Certain distinctive r a c i a l characters are available for immediate use in inheritance studies and bee improvement work. These include not only body characters expressed in the individual bee but colony characters as well. A few mutations of such nature as to be of great value in genetic work are likewise available.

8. The use of X-rays is the best method at present for inducing mutations.

9. Every care should be used to preserve and propagate mutant stock.

That Alabama Fair Hookup

By M. G. Dadant.

WHEN the writer recently attended the Alabama Beekeepers' Association meeting and the Alabama State Fair at Birmingham, Alabama, he was particularly struck by the wonderful display of honey at the Fair and the unique and desirable provisions which had been made, largely through the efforts of Mr. Thomas Atchison, State Apiary Inspector, and Mr. P. T. Strieder, Secretary and Manager of the Alabama State Fair for a demonstration of honey and its use in cooking.

The Alabama Power Company was appealed to to embody in its exhibit at the State Fair this year a demonstration in honey cookery. They consented not only to pay the expenses of Mrs. Jensen of the American Honey Institute to attend the Fair, but give her every convenience for making the demonstration a success. The setup of the entire demonstration booth is to be commended. Mrs. Jensen was furnished by the Alabama Power Company with two home demonstration assistants to help her with her work. Through Mr. Thomas Atchison, the Armours furnished hams for baking during the entire course of the State Fair. When the writer was there on Friday of the week of the Fair, twenty-one hams had already been baked and distributed in free sandwiches.

Mrs. Jensen and her demonstrators worked like "beavers" during the entire term of the fair, demonstrating, answering questions and distributing ham sandwiches which the writer can, by personal experience, assure you were highly delectable.

So unique and so admired by the public was this demonstration and the exhibit of honey immediately opposite by different members of the Association that P. H. Strieder, Secretary and Manager of the Alabama State Fair had struck off a special blue ribbon of proficiency for American Honey Insitute for their demonstration of honey.

We make special mention of this Alabama Fair and its demonstration as an example of what may be done in many of the other state fairs throughout the country as well as in the minor county fairs.

The Alabama Power Company was not unmindful of the possibilities of this cooperative work and the results have been so desirable that they are already planning on a larger demonstration next year with Mrs. Jensen again to deliver talks before various civic groups as well as to handle the demonstration at the fair itself.

Many of our organizations might do similarly and make contact with similar organizations who have regular demonstration stands looking toward such work at their state and county fairs which are really the finest means of advertising honey and disseminating information to the public. Many hundreds of leaflets and booklets were passed out on direct request and hundreds of questions answered by the ladies at the booth.

Exhibits of Alabama beekeepers opposite the Alabama Power Demonstration booth at the State Fair.

Alabama State Meeting.

The annual meeting of the Alabama State Beekeepers' Association was held at the Thomas Jefferson Hotel in Birmingham, Alabama on September 30, October 1 and 2. In connection was the Alabama State Fair at which the beekeepers had a fine exhibit and a wonderful demonstration by Mrs. Jensen of the American Honey Institute which will be reviewed elsewhere in these columns.

The Association meeting this year was exceptional in that there were almost as many amateurs as professional queen breeders and package shippers at the meeting. Birmingham is surrounded by a large number of amateur beekeepers.

Mr. Hale gave the welcoming address and somewhat of the experiences of himself in beekeeping as an amateur in and around Birmingham.

Mr. W. A. Ruffin explained briefly the purpose of the meeting and the desirability of having representation not only from the professional but from the amateur beekeepers of the state.

J. M. Robinson read a short financial report.

Mrs. Jensen of the American Honey Institute who was taking in the entire course of the Alabama State Fair, gave a discussion on what the American Honey Institute is accomplishing and the possibilities ahead.

The writer was very much struck by the very delightful address by Mr. R. J. Good, Commissioner of Agriculture and Beekeeping of the state of Alabama. Mr. Good discussed at length the changing conditions and the possibilities of beekeeping, working into the changing conditions in a profitable manner not only for the beekeepers themselves but for the agricultural interest of the state.

Mr. Good was emphatic in his assertion that the Department of Agriculture of Alabama and he as commissioner, assured the beekeepers of their both moral and financial support for any worthy project they might want for the advancement of Alabama beekeeping, either in its commercial or amateur phases.

This looks like a good opportunity for the possibility of an expansion of the program of the Chief Inspector, Thomas Atchison, who is now doing such fine work, both in extension and in inspection and who hasn't nearly the time necessary to cover the state as it should be covered.

Mr. and Mrs. G. W. Bohne from Louisiana and Mr. E. C. Davis, Extension Specialist, attended the meeting. Mr. Bohne stressed the desirability of uniform regulatory provisions as between the several states. The conflicting provisions now are making for difficulties on the part of the shipper, as well as the buyer of bees.

Mr. Bohne further stated that while inspection was adequate in many states in the Union, there were many who apparently were indifferent or ashamed of the very small appropriations and that some sort of a national hookup should be made whereby the backward states could be brought into line with those which had more generally accomplished the purpose of bee disease inspection and free intercourse between states.

Particular attention should be called to the address of Dr. Warren W. Whitcomb, Director of the Louisiana Field Station and the Bee Culture Laboratory at Washington, D. C.

Dr. Whitcomb's address followed that of Mr. M. G. Dadant who had discussed the possibilities of bee breeding and honey plant breeding in connection with the advancement of honey production in this country.

—o—

Iowa Apiarist's Report.

The report of Iowa State Apiarist for 1936 has been issued. The book contains 82 pages with the usual interesting variety. Copies sent out only on request and may be had by writing Prof. F. B. Paddock, State Apiarist, Ames, Iowa.

—o—

Oregon State Association Meeting November 26 and 27.

The Oregon State Beekeepers Association will hold its annual meeting at Corvallis, November 26 and 27.

Meetings will be in the Memorial Union Building, Oregon State College. The business meeting will be combined with two-day short course.

H. A. Scullen, Secretary.

—o—

California Convention, Fresno, November 15-17.

The dates for the annual convention of the California Association are November 15, 16 and 17 in Fresno. Much interest is being manifested in a discussion of federal bonded warehouses as a means to a more orderly system of marketing. This will be one of the principal topics at the convention.

—o—

British Columbia Field Day.

The two Coast divisions of the British Columbia Honey Producers' Association, Vancouver and the Fraser Valley, joined forces at Agassiz recently for the best field day of the season with about seventy beekeepers in attendance, at the experimental farm under J. Fraser.

C. B. Gooderham, Dominion Apiarist, demonstrated grafting and explained requeeing. Provincial Apiarist A. W. Finlay and Mr. Fraser demonstrated colony operations and questions were asked in round table fashion.

J. J. Woods, assistant superintendent at the farm; Dean F. M. Clement, of the University of British Columbia; and C. Street, the blind beekeeper of Haney, were among those present. W. H. Hicks and Mrs. Hicks acted as host and hostess.

According to reports by beekeepers, some colonies would obtain surpluses up to 200 pounds, and many averaging over 80 pounds. Many members of the association are preparing to show at the Vancouver Exhibition.

F. H. Fullerton,
British Columbia.

—o—

Washington State Beekeepers to Meet.

The Washington State Beekeepers Association will hold its thirty-third annual convention, in Yakima, on December 7 and 8. The program is not yet complete and anyone desiring to make suggestions should do so to the secretary. Arrangements for the meeting are in charge of the Yakima County Beekeepers Association, Robert Immeles, Toppenish, Secretary.

A cordial invitation is extended to friends of the bee and honey industry to attend.

M. F. Mommsen,
Secretary.

—o—

Notes from New Mexico.

The honey crop in the Pecos Valley was over in August. The honeyflow was very uneven. Fifteen miles south of Roswell, it was good, but around Roswell it was almost a failure. There will only be about half a crop, although a good grade and nice flavor. From a yard of 125 colonies, I extracted 6,580 pounds which is all sold.

Frank Summers,
New Mexico.

—ABJ—

Saskatchewan Crop Ninety Percent Down.

Saskatchewan's honey crop this year is 90 per cent under last year's, yet the province has had the largest honey export to Great Britain yet recorded, the shipments totaling 75,000 pounds. One section in the northeast of the province was good and colonies produced from 100 to as high as 250 pounds surplus, although the average for the province as a whole was only 15 pounds. One carload of honey was exported to Britain from Tisdale and another from Kelvington. Six years ago Saskatchewan made its first shipment a ten-pound pail.

F. H. Fullerton,
British Columbia.

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INSTITUTE INKLINGS

National Push For Apples.

A. G. Woodman of Michigan sends a copy of the Michigan Apple Institute's "Apple Peelings" which gives some idea of the organized efforts to sell the 1938 apple crop. An arrangement has been made to put on a real drive to increase the sale of apples. In the summer representatives from the Regional Apple Institutes met with the agricultural committee of the National Food chains representing 37,000 stores to make arrangements to conduct drives through the United States to increase sales, the companies themselves paying for the materials, newspaper space, broadcasting time and other advertising literature. The Institute Committee also contacted the management of the Retail Grocers who have 42,000 grocery store members and the Independent Grocers Association signified they would get behind the program.

Now is that a real push for apples? It's just the kind of work the American Honey Institute is trying to do. As Mr. Woodman says, "This should show the beekeeper that it is necessary to keep up with American Honey Institute activity. The fight for a fair share of the consumer's dollar is becoming more strenuous and any group of producers that are not organized will soon be submerged.

"The apple growers have the advantage of great volume but honey producers have more romance and poetry. The apple received publicity in getting Adam into complications in the Garden of Eden while honey has always conveyed the thought of purity and sweetness."

—o—

"Food Favorites Made With Honey" is the title of the new release from American Honey Institute. Prices to members 110—.45, 50—.35, 1000—$2.90, 500—$1.65. The release has four fine pictures and features "Ham Mediterranean," "Holiday Pudding," "Chocolate Ice Cream Sandwich," "Honey Fruit Cake," "Prune Pie," "Gingerbread," and "Chocolate Cookies." If interested, write American Honey Institute, Madison, Wisconsin.

—o—

How Nice!

One of our foremost beekeeping authorities says of Institute activities, "The continuance of the Institute over a period of ten years is, in my estimation, one of the most remarkable incidents in beekeeping history. I know the program must have been good, or members who have remained with it would not have continued over such a long time. However, few are paying their fair share for this honey publicity.

Now, isn't that nice? (All but the last part of it which is too true.)

—o—

New Cooperative Booklets

Cranberry people "Eatmor Cranberries" publish a beautiful illustrated recipe of baked ham with cranberries using 1½ cups strained honey for each recipe. More power to cranberries!

Thomas A. Faulds in "How to Make Perfect Cakes," a hand book for the modern baker, put out by the T. A. Faulds Company of Boston, includes recipes for several honey cake specialties. This is an 80-page booklet for making all kinds of cakes and sweet goods and is distributed free to 20,000 bakers throughout the United States.

"50 Delicious Desserts" by Helen S. Kintzing of National Biscuit Company has a beautiful brochure in color with many recipes. This company is a large user of honey.

"Meat in Menu Planning—A Guide to Good Meals" published by the National Live Stock and Meat Board of Chicago, a beautiful 32-page book, begins to make the use at once of what it has found in the honey prize Mediterranean recipe in cooking hams. So page 16 carries this advice: "Honey, trickled over a whole ham after it has been stuck with cloves and before putting back in the oven to brown, reaches a new high in delicious flavors."

—ABJ—

Top Entrance

I have wintered a few colonies with top entrances for several seasons. Can't remember that I ever lost a colony with them. In 1936 I had a heavy winter loss with bees otherwise wintered but did not lose a single colony with a top entrance.

I do not like the entrance in summer as when examining the brood nest the bees bother and are cross. Bees coming in from the field are confused and bewildered.

The entrance I use is inexpensive and easily applied. It may be removed quickly in the spring and the bottom entrance opened. The bees soon get used to the difference.

Saw out strips of shingle about an inch wide and nail to a thin alighting board as long as the width of the hive. Place on top of the hive body with alighting board on the underside of the shingle strips, put the inner cover on top and stack the super with its usual winter insulation on top of this.

Wm. T. Malmrose,
Nebraska.

The Absence of Vitamin E in Royal Jelly of Bees

This is the title of a reprint from the proceedings of the Society of Experimental Biology and Medicine under the authorship of K. E. Mason and R. M. Melampy, of the Department of Anatomy of Vanderbilt University, School of Medicine, and the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, respectively.

It is a report of work at the Connecticut Agricultural Experiment Station to determine the Vitamin E content of royal jelly of the honeybee which was done with rats with Vitamin E deficiency and indicates that feeding as much as one gram of royal jelly of the honeybee is not enough to cure the sterility of E-deficiency in the female rat.

———ABJ———

Sechrist Helps Again

From the window where I am writing I can look out at my apiary and feel glad that they average better and more nearly uniform than last year—much of this I owe to the careful study of the Sechrist articles. I had done a lot of reading of beekeepers' literature but was right where I needed a good system of management which they certainly gave. I am afraid it will be more than one or two years before I am really capable of following the articles creditably but am seeking to do so eventually. I have had to confine my expenses this year to the providing of room for the storage of nectar and the absolutely necessary expenses. They being a general and not local series I am having the interesting task of seeing just what will answer best in our locality.

Eleanor J. Neale,
Michigan.

———ABJ———

Two Sun Extractors

A city "critter" drove out to his old beekeeper friend in the country whom he had not seen for some time. As things change from time to time the city fellow noticed quite a lot of changes around the place, the old buildings replaced by new ones and many other changes. One of the "gaps" was that one of the sun extractors was gone. When he asked the beekeeper what happened to it the beekeeper answered, "There hasn't been enough sun around to keep both working so I had to get rid of one of them."

Paul E. Farrell,
California.

HONEY JARS

Hazel-Atlas presents four complete lines of Honey Jars, all designed specially for honey packers . . . Crystal clear glass displays the natural beauty of your product . . . Jars are easily packed and labeled . . . Available in a complete range of sizes . . . Write for free samples.

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QUALITY BRED ITALIANS,
Larger quantities, better quality and service. Write us for prices and book orders now for spring delivery.
YORK BEE COMPANY, JESUP, GEORGIA
(The Home of Quality Products)

Crop and Market Report

COMPILED BY M.G. DADANT

For our November Crop and Market page, we asked our reports to answer the following questions:

1. How is the final crop compared to 1936?
2. How is honey selling locally?
3. How is jobbing demand?
4. Are prices firming jobbing? Retail?
5. Condition of bees going into winter.

Crop.

There has been no material change in the final crop from our last report. In fact, the weather has not been favorable for a fall crop owing to cool days and in many instances, rainy weather. We have made very few changes in our price page as opposite. In fact, in many cases the late summer flow and fall flow has been disappointing and it is probable that bees have not filled as satisfactorily in the brood chamber as they should have.

Honey Selling Locally

In most instances reports are that honey is selling at least as good as last year if not better in a local way. This is rather surprising in view of the fact that the southern and central sections have had a rather heavy crop of cane syrup and sorghum and this is being sold naturally in competition with honey. In addition, the fruit crop has been abnormally large and as this moves off in the fall, it has a tendency to check a little the demand for honey. In addition, the weather has not been probably as cold as usual, at least there has not been the cold snaps, the warm weather continuing fairly well into the northern sections. It is not until pancakes are in order and winter top coats come out that honey really begins to move in a satisfactory fashion.

Jobbing Demand.

In the eastern and central sections and into the plains states, the jobbing demand has been excellent. We might say that jobbers have more or less been vieing each other for good white honey, owing to its scarcity.

On the west coast, however, there has been a tendency on the part of the larger buyers to hold back and buy as they needed it, and as reported by some of our correspondents a tendency, they feel, to press the market down rather than to go up with the general tendency on account of the short crop in the white honey sections. Moreover, we might say that as a general rule the usual sources which use honey are not completely supplied and undoubtedly as the season advances those still holding honey are going to notice the effect. This is particularly true of the white grades of honey which are undoubtedly scarce this year. Amber honey does not seem to be meeting with the favor that it did three or four years back on the part of the baker trade. This is largely probably due to the fact that very strong fall honey has not proven satisfactory for many types of baking, particularly the baking of white breads. In fact, we look for a rather more striking spread between white and amber prices than has been the case for several years.

Are Prices Firming.

As mentioned in previous paragraphs, the jobbing demand is firming particularly in all sections except the Pacific Coast owing to the shortage of the white honey. lc is particularly noticeable in the demand for ton and less than carload lots, as these are being rapidly picked up by the smaller bottler who is unable to purchase in carload lots. It is our opinion that the jobbing price is firming materially and is undoubtedly at least 1 cent above similar dates last year.

When it comes to retail prices, there has been rather a tendency to hold at last year's prices, although when replacement comes of stocks of honey, undoubtedly, the retail prices are going to have to show a general rise. Already we have several reports that retail prices have had to be advanced, althougn several more have come in to the effect that 5-pound pails in their neighborhood are still selling as low as 49c each which is rather striking low price in view of the firmness of the market otherwise.

Condition of Bees.

As a general rule, bees are going into winter quarters in satisfactory shape. This applies particularly to all of the southern states and as far as California where the late crops have been sufficiently good to build the bees up in satisfactory fashion and also furnish winter stores.

It is throughout the usual Dutch white clover sections, however, and on into the plain states and Rocky Mountain region that we find that the late summer flows and fall flows have had the effect of not yielding enough honey for winter stores and in many cases the bees, unless they have been fed, are going into winter with light or at least moderate stores. Several reporters state that hopes are for a moderate winter so that the bees will not use heavy stores, or there will be much starvation. Such conditions exist up into Michigan and southern Wisconsin and southern Minnesota. In northern Minnesota and North Dakota, the bees seem to be in very much better condition.

All in all, we would say that unless bees are fed throughout much of the central west and plain states or at least checked very carefully, there is apt to be very heavy losses of bees during the coming winter and this naturally will apply particularly to the small beekeeper who gives no attention to feeding. Even in the case of larger beekeepers, there is possibly a tendency to neglect the feeding owing to the fact that the crop has been short and funds are not readily available for the buying of sugar for syrup.

Perhaps the writer is painting too dreary a picture. There have, of course, been many beekeepers who harvested excellent crops this year, but conditions are extremely spotty and as the opposite page will show the crop in most instances is extremely short of normal and short of last year which was not itself a normal crop.

In fact, Georgia, Louisiana and California seem to be about the only states that can boast of a larger crop than last year. Of course, California, Louisiana and Georgia all had short crops in 1936 which makes it appear that the present crop even there is not much over normal.

Summary.

All in all, it looks like the present crop of honey should move without much difficulty and without any sacrificing of prices during the season. As a matter of fact it rather tends to infer that prices particularly on white honey should stiffen as the season advances. We learn of carload of Montana honey selling at 6½ cents f. o. b. shipping point. Numerous cars are reported selling at around 6 cents. In Michigan where the crop is short, there apparently is a scramble to get all of the good size lots of white honey and prices are ranging as high as 8c per pound for it.

WANTED — HONEY
Jewett & Sherman Co.
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Write for Our Special Club Offers
AMERICAN BEE JOURNAL

Iverson Honey Company (Not Inc.)
Successor to
Edwin H. Guertin, 201 N. Wells St., Chicago
Extracted Honey bought and sold
Reference: First National Bank of Chicago.

SUGGESTED PRICES — F.O.B. SHIPPING POINT	Crop Compared to 1936	Honey Selling	Buyers?	C/L White Extracted	C/L Amber Extracted	C/L No. 1 Comb	10-lb. Retail Extracted	5-lb. Retail Extracted	10-lb. Bulk Comb	5-lb. Bulk Comb	1-lb. Jar Retail	Comb Section Retail	Comb - Case to Grocer	Discount to Grocer	Discount to Jobber
NEW ENGLAND	40%	Good		____	____	____	$1.60	$ .85	____	____	$ .25	$ .30	$5.00	25%	35%
NEW YORK	50%	Good	Yes	.08	.07	$3.50	1.30	.70	1.40	.75	.25	.25	4.50	25%	35%
NEW JERSEY, DELAWARE, MARYLAND	60%	Good		____	____	____	1.50	.85	____	____	.25	.25	4.50	20%	30%
WEST VIRGINIA, VIRGINIA	60%	Good	Yes	.07½	.06½	3.00	1.30	.70	1.40	.75	.25	.25	4.50	20%	30%
NORTH CAROLINA, SOUTH CAROLINA	80%	Good		____	____	____	____	____	____	____	____	____	____	____	____
GEORGIA	120%	Good	Yes	.07½	.06½	____	.90	.50	1.10	.60	.25	.25	____	20%	25%
FLORIDA	60%	Good	Yes	.07½	.06	____	1.15	.60	1.25	.70	____	____	____	25%	35%
ALABAMA, MISSISSIPPI	80%	Good		.07	.06	____	1.25	.65	1.40	.75	.20	.25	____	20%	25%
KENTUCKY, TENNESSEE	150%	Fair		.07½	.06	3.00	1.40	.75	1.80	1.00	.20	.20	____	20%	25%
ARKANSAS, LOUISIANA	150%	Good		____	____	____	1.40	.70	1.50	.80	.20	____	____	____	____
TEXAS	110%	Fair		.06	.05	____	1.25	.65	1.35	.70	.25	.25	____	____	25%
NEW MEXICO, ARIZONA	60%	Fair		.06	.05	____	1.00	.60	____	____	____	____	____	____	____
PENNSYLVANIA, OHIO	40%	Fair		.07½	.06	____	1.25	.70	____	____	.25	.25	4.50	____	25%
MICHIGAN	40%	Good	Yes	.07¾	.06½	3.00	1.30	.75	____	____	.25	.25	4.00	25%	40%
WISCONSIN	40%	Good	Yes	____	____	____	1.30	.75	____	____	.25	.25	____	20%	30%
MINNESOTA	40%–70%	Good	Yes	.06½–.07	.05½	3.50	1.20	.65	____	____	.20	.20	3.60	30%	40%
INDIANA	50%	Good	Yes	____	____	____	1.35	.75	____	____	.25	.25	3.60	____	____
ILLINOIS, IOWA, MISSOURI	50%	Good	Yes	.07½	.06	3.50	1.25	.70	1.50	.80	.25	.20	4.00	20%	30%
NORTH DAKOTA, SOUTH DAKOTA	60%	Good	Yes	.06¾–.07	.06	3.75	1.25	.70	1.35	.70	.25	.25	4.00	25%	35%
NEBRASKA	30%	Good	Yes	.07	.05½	3.50	1.25	.65	1.35	.70	.20	.20	3.75	20%	30%
KANSAS, OKLAHOMA	40%	Fair		____	____	____	1.25	.65	____	____	.25	.25	____	20%	30%
WYOMING, COLORADO	50%	Fair	Yes	.06½–.07	.06	____	1.00	.60	____	____	.20	.20	3.50	20%	30%
MONTANA	80%	Fair	Yes	.06½	.05½	____	1.00	.55	____	____	.18	____	____	25%	35%
IDAHO	40%	Good		.06	.05¾	3.00	1.00	.55	____	____	____	____	3.50	____	____
UTAH, NEVADA	40%	Good		.06–.06½	____	____	1.00	.55	____	____	____	____	____	20%	30%
WASHINGTON, OREGON	50%	Good		.06½–.07	.05½–.06	3.50	1.00	.55	____	____	.20	.25	4.00	____	____
CALIFORNIA	125%	Fair		.06	.04½–.05	____	1.00	.55	____	____	.20	.25	____	20%	30%
BRITISH COLUMBIA	120%	Good		.10½	____	____	1.50	.85	____	____	____	____	____	____	____
ONTARIO and QUEBEC	70%	Fair		.08	.07	____	1.25	.65	____	____	____	____	____	____	____
SASKATCHEWAN and ALBERTA	50%	Fair		.09	____	____	____	____	____	____	____	____	____	____	____
MANITOBA	80%	Good		.10	____	____	1.10	.60	____	____	____	____	____	____	____

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

"SHE-SUITS-ME" QUEENS. None better. Only choice selected queens sent out. Line-bred, three-banded stock. Prices after May 20, one queen $1; six for $5. Special prices on large quantities. Send for circular
Allen Latham, Norwichtown, Connecticut.

BOOK YOUR ORDER now and get those large overweight packages of young bees when you want them. Italians or Caucasians.
Weaver Apiaries, Navasota, Texas.

GENUINE THREE BANDED ITALIAN Bees and Queens for 1938. Alamance Bee Company, Geo. Elmo Curtis, Mgr. Graham, N. C.

BOOK YOUR ORDER with me now if want your packages to receive extra care and attention next spring. Hugh Graham, College Station, Texas.

CAUCASIAN QUEENS and Package Bees. Booking orders now for delivery in 1938. Quality stock and service guaranteed.
Bolling Bee Co., Bolling, Ala.

CAUCASIAN PACKAGE BEES. Booking orders now for 1938 delivery at new market agreement prices.
P. B. Skinner Bee Co., Greenville, Ala.

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FOR SALE—Northern white extracted and comb honey.
M. W. Cousineau, Moorhead, Minn.

CHOICE Michigan Clover Honey. New 60's.
David Running, Filion, Michigan.

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

TWO TONS of fine Amber extracted honey in new cans and cases. Sample for the asking. W. S. Earls, New Canton, Ill.

NICE LIGHT AMBER HONEY well ripened and heavy. $4.00 a 60 lb. can. M. Noack, 3958 Polk St., Chicago, Ill.

BUCKWHEAT HONEY famous Helderberg quality in 60's at seven cents per pound.
H. Greulick & Son, Scotia, N. Y.

FOR SALE—Well ripened clover honey, car lot or local shipments. Will be pleased to submit sample. THE COLORADO HONEY PRODUCERS' ASSN., 1324 Market St., Denver, Colorado.

HONEY FOR SALE—All kinds, any quantity. H. & S. Honey and Wax Company, Inc., 265-267 Greenwich Street, New York.

FOR SALE—Fancy, well ripened, white sweet clover honey in 60-lb. cans. Extra good quality. Dadant & Sons, Hamilton, Ill.

DELICIOUS PALMETTO HONEY in new sixties.
Peter W. Sowinski, Fort Pierce, Florida.

FOR SALE—Clover extracted honey in sixties, 8c; amber 7c.
H. G. Quirin, Bellevue, Ohio.

NEVADA ALFALFA SWEET CLOVER HONEY. C. E. Andrews, Fallon, Nevada.

HONEY PACKERS—Write us for prices on carload lots of California and Western Honeys. We stock all varieties. HAMILTON & COMPANY, 108 West Sixth St., Los Angeles, California.

FOR SALE—Nice white, sweet clover honey, in 60-lb. cans, 7c f.o.b. Dunlap, Iowa. Sample ten cents. E. S. Miles & Son.

HOWDY'S HONEY: White, clover extracted and small lot amber mixed fall flowers including buckwheat.
Howard Potter, Ithaca, Michigan.

FOR SALE—Sweet clover honey. Per case of 12 5-lb. pails $4.80 f.o.b. Toronto.
M. W. Thompson, Toronto, S. Dakota.

NEW CROP white extracted, case or car lots. Satisfaction guaranteed. Sample 20 cents. Prices reasonable.
Harry C. Kirk, Armstrong, Iowa.

HONEY AND BEESWAX WANTED

WANTED—Extracted Honey. Send sample and price delivered to T. W. Burleson & Son, Waxahachie, Texas.

WANTED—All dark grades of honey.
C. Jankowski, Russell, Illinois.

WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, California.

WANTED — White and Amber Extracted Honey, any quantity; also beeswax. Write THE FRED W. MUTH CO., Pearl and Walnut Sts., Cincinnati, Ohio.

ALL GRADES, including capping melter honey. Prairie View Apiaries, 2005 Fullerton, Detroit, Michigan.

WANTED—Comb, chunk comb, white and light amber extracted honeys. Any amount.
Central Ohio Apiaries, Millersport, Ohio.

WANTED—White and Light Amber extracted honey in carlots or less. Clover Blossom Honey Co., 712 Kossuth St., Columbus, Ohio.

CASH PAID for cars and less than cars of extracted honey. C. W. Aeppler Company, Oconomowoc, Wisconsin.

WANTED—Comb, chunk comb and extracted honey. Any amount.
Kedash Brothers, Chillicothe, Ohio.

BEESWAX WANTED—Any quantity. Write for prices and shipping tags. The A. I. Root Company of Iowa, Council Bluffs, Iowa.

FOR SALE

HONEY CASES AND CANS. Used once.
Leon Short, Zion Baking Industry, Zion, Illinois.

FOR SALE—100 Standard ten frame comb honey supers, like new, no disease, consider trade for honey. Chester Keister, Clarno, Wisonsin.

FOR SALE— 800 Colonies of bees in best locality for package bees and queens in California. Carl Larsen, Colusa. Calif.

WANTED

WANTED—FILTER PRESSES, all sizes and types. Also Bottling Equipment.
CONSOLIDATED PRODUCTS CO., INC.,
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SUPPLIES

BEST QUALITY bees supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colorado.

YOUR HONEY will sell more rapidly when displayed with a straw beehive. Photos free. G. Korn, Berrien Springs, Mich.

DIFFERENT, that's all. Written and published for the instruction of beekeepers. 52 pages of breezy entertaining beekeeping comment each month. One year, $1.00; two years, $1.50. Sample, 3c stamp.
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ATTRACTIVE PRICES on bee supplies and comb foundation. Send for catalog. Saves you money. THE FRED W. MUTH CO., Pearl and Walnut Sts., Cincinnati, Ohio.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices.
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YOUR WAX worked into deep cell natural base medium brood foundation for 15c lb., 100 lbs. $11.00, Thin super 22c.
Fred Peterson, Alden, Iowa.

$11.00 IS OUR PRICE for working 100 lbs., of your wax into medium brood. Guaranteed best quality, sample and shipping tags free. Free catalogue tells why we undersell everybody on quality supplies, write. Walter T. Kelley, Co., Paducah, Kentucky.

SAVE QUEENS. Safin cages now 15c. Ten for $1.00.
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POULTRY

BIG MONEY in poultry this year. Read Poultry Tribune, the big monthly magazine that tells how leading poultry raisers make money. The only poultry magazine operating its own experimental farm. Five years $1.00, one year trial 25c. Poultry Tribune, Dept. C-61, Mount Morris, Ill.

MISCELLANEOUS

PLANS FOR POULTRY HOUSES — All styles; 150 illustrations. Tells you the type to build for your particular locality. Secret of getting winter eggs, and copy of "Inland." Send 25c.
Inland Poultry Journal, Spencer, Indiana.

BOOK BARGAIN—Very slightly damaged copies of Beekeeping in the South by Kenneth Hawkins, cloth bound, published to sell at $1.25, price postpaid only 29 cents.
American Bee Journal, Hamilton, Ill.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, The Way's End, Foxton, Royston, Herts, England.

Baerg's Beekeeping

W. J. Baerg, of the Department of Entomology, publishes a revised bulletin on beekeeping through the Extension Service of the College of Agriculture, University of Arkansas and the U. S. Department of Agriculture cooperating as Extension Circular No. 326.

The revised bulletin is well illustrated and brings the common discussions of location, honey plants, handling bees and seasonal management down to the basis of Arkansas conditions. It discusses the important honey plants of Arkansas with the approximate order of their importance.

Those interested inquire for Circular No. 326 from the Extension Service, University of Arkansas, Little Rock.

"Homes of the West"

This is the title of a new garden quarterly, the first issue of which was out September first at ten cents a copy, $2.00 for three years and a very ambitious publication indeed. The president of the New Eleven States Publishing Company, at 564 Market Street, San Francisco, is Samuel G. Blythe. The editor and publisher is Loren A. Schuler. "Homes of the West" endeavors to cover intimately the needs of homemaking in the eleven western states.

In this number there are some delightful home plans of small modern houses, style news, garden and flower news, all of them timely, many of the pictures in full color. In fact we have seen very few papers with more pictures than this magazine has, at least in this particular issue. What to do from month to month; news of the garden clubs.

We welcome this publication. If you are interested, write to the address given.

———ABJ———

Relation of Beekeeping to Wild Life and Conservation

(Continued from page 520)

ducer as well as for the honey producer.

Another interesting phase of the close association of the Soil Conservation Service program and the honeybee is in the trees which are being used in erosion control. The list of trees is made up entirely of those which are of value to the bee either for pollen or nectar or both. While these trees may not be used for seed production to need the services of honeybees for pollination and these trees cannot be considered as a source for commercial honey production yet the increased population of these trees would be of untold value in the general prosperity of honeybees which might serve effectively in the same locality for legume pollination. This is in reality only another portion of a well balanced and organized program for the objective intended.

The honeybee is not often considered as a part of a wild life program but that is because the pollination activities of the bees are not fully inventoried The bees visit many of the so-called wild trees, shrubs and a wide variety of weeds which results in the set of seeds and fruits. These results of honeybee pollination serve as food for several species of mammals and a wide range of birds either migratory or those who winter in the North.

WALTER T. KELLEY

Do It Now!

Many of you beekeepers have been seeing my advertisements for year but have never written for a catalogue. DO IT NOW and find out what you have been missing.

I am about to start my 15th year of manufacturing beehives and my factory is equipped with finest machinery and manned by experienced workmen. In the rush season we can manufacture a carload of lumber into beehives in a week but no order is too small for us to handle.

$11.00

I will work your wax into medium brood foundation for $11.00 per 100 lbs. Write for samples, shipping tags, etc.

SAVE WITH SAFETY WITH KELLEY

THE WALTER T. KELLEY CO., Paducah, Ky.

Manufacturers of Bee Supplies

Package Bees -:- Queens

75c FOR QUEENS : 2-LB. PKG. with Queen $2.45 : 3-LB. PKG. with Queen $3.15

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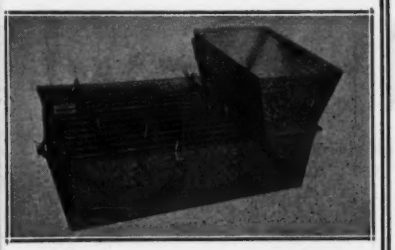
Separates the honey from the cappings as they fall from the knife, and makes a more thorough job than if they are left to cool and settle into a solid mass.

S. P. HODGSON & SONS

New Westminster, B. C. Canada



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ALL GRADES
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Any quantity.
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State if cans have letter "C" on bottom. Order from Ernest Fahlbeck, 406 S. Springfield Ave., Rockford, Ill., C. W. Aeppler, Oconomowoc, Wis. Walter T. Kelly Co. Paducah, Ky. August Lotz Co., Boyd, Wisc.

A Song
I Am The Bee

I am the bee, the honeybee,
I work from daylight until dark
with loads of honey, now 'aint it funny,
I'm just as happy as a lark?
I kiss the flowers, in shady bowers,
For they are all in love with me,
Their petals blush and stare, at pollen in my hair,
For I am nature's sweet Fair-ie.

I am the bee, the busy bee,
I work from dark until daylight.
I guard the fold, from robbers bold
And care for babies in the night,
The honey blend, the Queen attend,
I love the whole great colony,
For wax-comb, I have striv'n, my life is freely giv'n,
For I am nature's sweet fair-ie.

Drone, I am the drone,
I roam about the whole long day,
By sweet co-ed, am always fed,
I take no part in any fray.
When the sun is bright,
'Tis then the virgins take their flight,
'Til at my side, I die for bride,
Or winter comes, I'm left to starve outside.

Here comes Her Highness, make way, the Queen,
Here comes Her Highness, make way, the Queen.

Queen, I am, of all this great domain,
I alone to live,
It is my privilege and desire,
All work for me, all die for me,
Please don't accuse me of satire.
Wed and widow too, upon my glorious wedding day,
Thousands, each day, of eggs, I lay,
'Til I am worn and then I'm cast away.

(Copyright, 1937, by C. E. Phillips, Canada.)

ABJ

That Hay Fever Story

Readers will remember an Associated Press release which has found its way into a large number of papers in the United States reporting that Captain Geo. D. McGrew of the Medical Corps of the Army, had great success with the use of honey for hay fever patients. To many this meant, of course, that the feeding of honey of any kind would relieve hay fever anywhere, anytime, and so the press notice meant it.

From a dozen or more subscribers, clippings of the paper notice were sent to us. The article referred to appeared in the May issue of "The Military Surgeon" page 371, and reports an experiment in the treatment of hay fever started in 1936 in El Paso, Texas. Reports received there indicated that there were individuals who found varying degrees of relief from hay fever symptoms by eating honey produced in their vicinity and particularly from chewing the comb wax. It was inferred that the benefit received was from the oral extraction of the pollen in the honey and wax.

Oral extract containing pollen allergic was used in cases at the hospital at El Paso with varying results. Some patients experienced considerable relief, others suffered severe reaction. A continued trial of the oral treatment is suggested in comparison with injection methods.

So the actual experiment by Captain McGrew was confined not to honey but to an oral extract the use of which was suggested to him because several patients noticed relief after eating locally produced honey and chewing the wax. In writing about it, Dr. McGrew says: "Fortunately for them the pollen causing their symptoms depended on insects for transmission and for this reason it was probably present in the wax. Chewing this wax extracted enough pollen protein to give them relief from hay fever.

"For several reasons it would be inadvisable to recommend this type of treatment generally. The chances for successful results are greatly increased by treatment of the allergic individual with an oral extract of the pollen or pollens to which he reacts by skin tests. Since this is so and since the use of the haphazard method is too uncertain, I don't believe beekeepers would derive any benefit from knowing about it. Further scientific knowledge is necessary before recommending that anyone having hay fever try to treat themselves. The article in the Military Surgeon was to bring before the medical profession a less expensive, easier and safer method by which some hay fever cases may be treated successfully. The general publicity given to the article after it was out of my hands is sincerely regretted since it will probably do some harm and cause considerable disappointment to those who try it without a physician's help."

ABJ

Ball Score Changed By a Bee

A United Press clipping in the Miami Tribune reports how a bee saved the day for an all-star baseball team in Massachusetts. A bee stung pitcher George Johnson, of the West Cardinal team, just as he was winding up to pitch. Johnson didn't make the pitch—the umpire called it a ball. A prisoner on third base, who was attempting to steal home, was allowed to score.—P-N-T. Baross.

Increase HONEY SALES with Dripcup Dispensers—Use them as a premium or sell them filled with honey.

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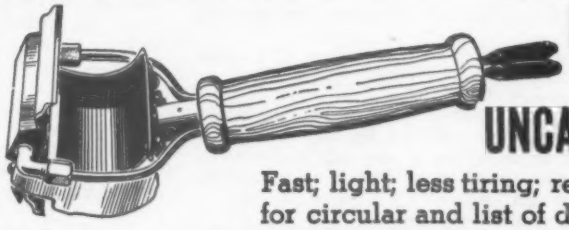

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American Bee Journal
Hamilton, Illinois

The Postscript

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

The bottle of pollen from the date palm sent by LeRoy Jones, of Arizona, which was mentioned editorially in July was laid aside for late feeding. When preparing the bees for winter a few were found to be short of reserve pollen. When feeding for stores this pollen was mixed with syrup in the form of a paste and given to a weak colony. The bees were not eager to bother with pollen after brood rearing had ceased.

ABJ

When brood rearing is active the bees seem eager for pollen and take meal readily if no natural pollen is available. It appears that pollen supplies should be stored early while colony activities are at their height. It should not be difficult to develop a method of providing the bees with pollen once we have learned how to gather it efficiently. Perhaps it would have been better to mix the pollen with more syrup and thus give them a thinner product, liquid rather than paste.

ABJ

A. F. Mead sends a sprig of purple loosestrife from the vicinity of Battle Creek, Michigan. He states that it is abundant in the swamps in that vicinity. This species (Lythrum salicaria) came from Europe and has become naturalized in wet places along the Hudson and Mohawk Rivers and along the railroads in New York. It is a bit surprising to learn that it is so common as far west as Michigan.

New York beekeepers report it as the source of a dark and strong flavored honey.

ABJ

Enquiries continue to come for Vitex incisa negundo Small trees of this species are offered by the Vaughan Seed Co., at Chicago. It is a very desirable shrub to plant for the bees in the southwest but is not hardy enough for the northern states.

ABJ

The arrival of little Robert Dadant, the fifth generation by the name of Dadant in this community, was the occasion of a comment on this page a few months ago. Since that time there has been another boy of similar ancestry but whose name is not Dadant. Little John Stephen Grout is Henry Dadant's grandson and the boy's father, Roy Grout, is a member of the firm.

I am pleased to have the opportunity to present a picture of four generations of Dadant men to our readers at this time. Seated is C. P. Dadant, hale and hearty at 86. Standing is his son, Maurice, who signs himself "M. G." The baby's father is Robert, known to everybody as Bob. The baby has the same name but is called Bobby.

Charles Dadant, founder of the business, died in 1902. Thus little Bobby is the fifth in the male line of the Dadant family in this community.

ABJ

An interesting letter comes from Cecil C. Astin, of New Bilton, England. He speaks of the 80 pounds taken from three stocks as very small harvest in comparison with the large crops he reads of here. It might be well to say to him that he reads only of the big crops and that there are plenty of beekeepers in this country who get no more than he. In fact I must admit that the average of the bees in my care this season was even less than that. This was a very poor season.

We do get large crops in favorable years but it too often happens that the yield is disappointing.

ABJ

B. P. Sieber of Belle Ellen, Alabama, sends a specimen of crownbeard, (Verbesina) which grow abundantly on the hillsides of that region. It gives a good bloom in September and October and although this is his first year in that location he is encouraged to expect good returns from it. Crownbeard is one of the finest of the fall honey plants and the beekeeper who has plenty of it within reach is fortunate. Sieber gets surplus from black gum, persimmon, tulip-poplar and sumac as well as bitterweed in addition to the crownbeard. Not a bad variety.

Many letters have come asking about seed of the Zofka red clover. Since several who have ordered seed from Europe have failed to get it, we do not know where any seed can be secured at the present time. The small quantity which we have will all be used for further test. We hope that by the end of next season seed will be available to those who wish to give it a trial. By that time we should know more about whether the plant is winter hardy in this climate. It will be of little value here if it will not stand our winters.

ABJ

Dr. E. A. Hollowell of the U. S. Department of Agriculture, writes that Zofka red clover from the same batch of seed as ours, planted at Madison, Wisconsin, showed bad leaf hopper injury. This is a little surprising since our plot remained healthy throughout the summer in spite of the presence of leaf hoppers. There is common complaint of leaf hopper injury to red clover coming from Central Europe. It is a bit puzzling to know why results should be so different at Madison and at Atlantic.

ABJ

J. J. Homolka of Brownville, Florida, reports that in 1917 he had a bad case of rheumatism in his hip. He took a heavy dose of bee stings about a half inch apart over the painful area with the result that he has never had a return of the trouble. He says that the beekeeper has his own medicine for rheumatism.

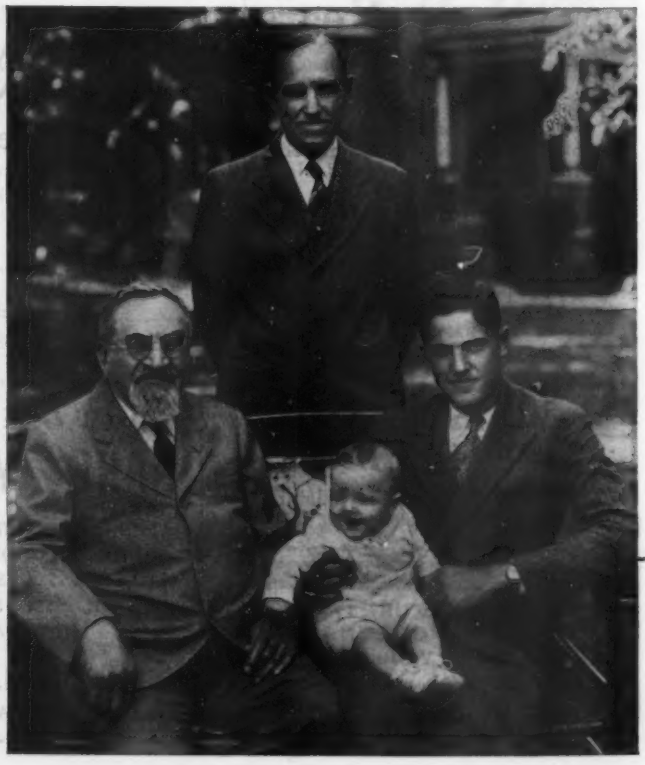
ABJ

Mr. Homolka refers to the editorial in the September number about earthen jars for honey. In his home country honey was stored only in earthen jars or wood containers. Such earthen containers are family heirlooms passed along from generation to generation.

ABJ

Speaking of grandchildren, little Virginia Barnard, born to my daughter Ruth, in a Cleveland hospital on October 13, is the latest arrival in my family.

FRANK C. PELLETT.



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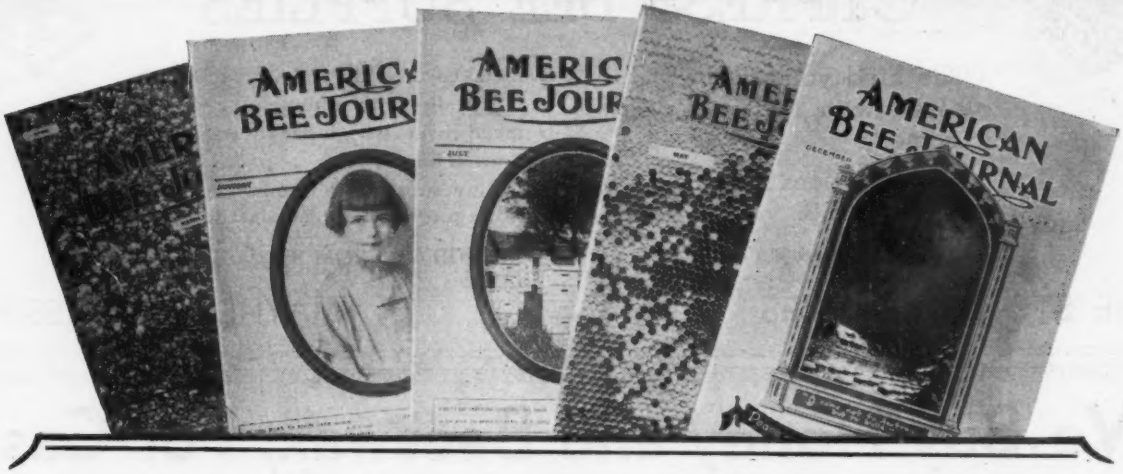

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